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INTEGRATED INFORMATION SUPPORT SYSTEM (IISS)  
Volume VIII - User Interface Subsystem  
Part 21 - Forms Driven Forms Editor Unit Test Plan

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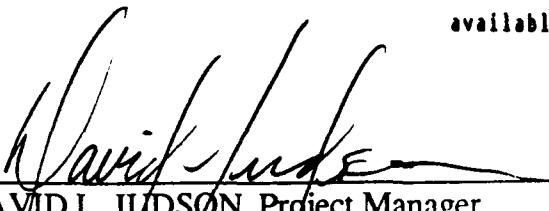
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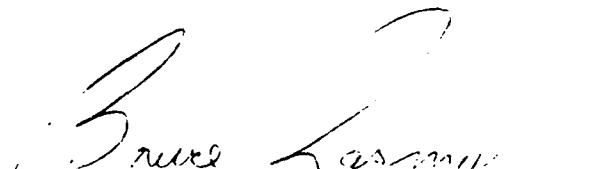
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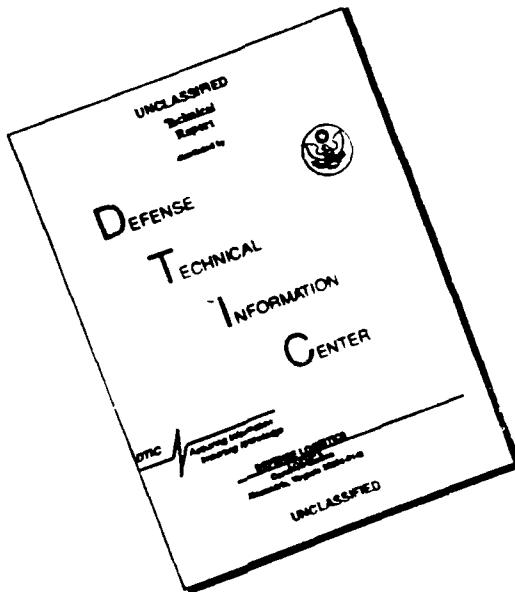
  
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FOREWORD

This technical report covers work performed under Air Force Contract F33600-87-C-0464, DAPro Project. This contract is sponsored by the Manufacturing Technology Directorate, Air Force Systems Command, Wright-Patterson Air Force Base, Ohio. It was administered under the technical direction of Mr. Bruce A. Rasmussen, Branch Chief, Integration Technology Division, Manufacturing Technology Directorate, through Mr. David L. Judson, Project Manager. The Prime Contractor was Integration Technology Services, Software Programs Division, of the Control Data Corporation, Dayton, Ohio, under the direction of Mr. W. A. Osborne. The DAPro Project Manager for Control Data Corporation was Mr. Jimmy P. Maxwell.

The DAPro project was created to continue the development, test, and demonstration of the Integrated Information Support System (IISS). The IISS technology work comprises enhancements to IISS software and the establishment and operation of IISS test bed hardware and communications for developers and users.

The following list names the Control Data Corporation subcontractors and their contributing activities:

<u>SUBCONTRACTOR</u>	<u>ROLE</u>
Control Data Corporation	Responsible for the overall Common Data Model design development and implementation, IISS integration and test, and technology transfer of IISS.
D. Appleton Company	Responsible for providing software information services for the Common Data Model and IDEF1X integration methodology.
ONTEK	Responsible for defining and testing a representative integrated system base in Artificial Intelligence techniques to establish fitness for use.
Simpact Corporation	Responsible for Communication development.
Structural Dynamics Research Corporation	Responsible for User Interfaces, Virtual Terminal Interface, and Network Transaction Manager design, development, implementation, and support.
Arizona State University	Responsible for test bed operations and support.

TABLE OF CONTENTS

	<u>Page</u>
SECTION 1.0 GENERAL .....	1-1
1.1 Purpose .....	1-1
1.2 Project References .....	1-1
1.3 Terms and Abbreviations .....	1-2
SECTION 2.0 DEVELOPMENT ACTIVITY .....	2-1
2.1 Statement of Pretest Activity .....	2-1
2.2 Pretest Activity Results .....	2-1
SECTION 3.0 SYSTEM DESCRIPTION .....	3-1
3.1 System Description .....	3-1
3.2 Testing Schedule .....	3-2
3.3 First Location Testing .....	3-3
3.3.1 Test Materials on VAX .....	3-3
3.4 Subsequent Location Testing on VAX .....	3-3
SECTION 4.0 SPECIFICATIONS AND EVALUATIONS .....	4-1
4.1 Test Specification .....	4-1
4.2 Test Methods and Constraints .....	4-3
4.3 Test Progression .....	4-3
4.4 Test Evaluation .....	4-4
4.4.1 Test Evaluation on the VAX .....	4-4
SECTION 5.0 TEST PROCEDURES .....	5-1
5.1 Test Description .....	5-1
5.2 Test Control .....	5-1
5.3 Test Procedures .....	5-1
5.3.1 Keypad Function .....	5-1
5.3.1.1 Keypad on VAX .....	5-2
5.3.1.2 Keypad on IBM .....	5-2
5.3.2 Test Procedures on VAX .....	5-2
5.3.3 IBM Test Procedures .....	5-3
5.3.4 Testing the FDFE .....	5-4

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LIST OF ILLUSTRATIONS

<u>Figure</u>	<u>Title</u>	<u>Page</u>
3-1	Interface Block Diagram .....	3-2
5-1	Keypad for VT100 .....	5-2
5-2	IISS Logon Screen .....	5-4
5-3	IISS Function Screen .....	5-5
5-4	Invoking the FDFE .....	5-6
5-5	Test Screen 1 .....	5-7
5-6	Test Screen 2 .....	5-8
5-7	Test Screen 3 .....	5-9
5-8	Test Screen 4 .....	5-10
5-9	Test Screen 5 .....	5-11
5-10	Test Screen 6 .....	5-12
5-11	Test Screen 7 .....	5-13
5-12	Test Screen 8 .....	5-14
5-13	Test Screen 9 .....	5-15
5-14	Test Screen 10 .....	5-16
5-15	Test Screen 11 .....	5-17
5-16	Test Screen 12 .....	5-18
5-17	Test Screen 13 .....	5-19
5-18	Test Screen 14 .....	5-20
5-19	Test Screen 15 .....	5-21
5-20	Test Screen 16 .....	5-22
5-21	Test Screen 17 .....	5-23
5-22	Test Screen 18 .....	5-24
5-23	Test Screen 19 .....	5-25
5-24	Test Screen 20 .....	5-26
5-25	Test Screen 21 .....	5-27
5-26	Test Screen 22 .....	5-28
5-27	Test Screen 23 .....	5-29
5-28	Test Screen 24 .....	5-30
5-29	Test Screen 25 .....	5-31
5-30	Test Screen 26 .....	5-32
5-31	Test Screen 27 .....	5-33
5-32	Test Screen 28 .....	5-34
5-33	Test Screen 29 .....	5-35
5-34	Test Screen 30 .....	5-36
5-35	Test Screen 31 .....	5-37
5-36	Test Screen 32 .....	5-38
5-37	Test Screen 33 .....	5-39
5-38	Test Screen 34 .....	5-40
5-39	Test Screen 35 .....	5-41
5-40	Test Screen 36 .....	5-42
5-41	Test Screen 37 .....	5-43
5-42	Test Screen 38 .....	5-44
5-43	Test Screen 39 .....	5-45
5-44	Test Screen 40 .....	5-46
5-45	Test Screen 41 .....	5-47
5-46	Test Screen 42 .....	5-48
5-47	Test Screen 43 .....	5-49
5-48	Test Screen 44 .....	5-50
5-49	Test Screen 45 .....	5-51
5-50	Test Screen 46 .....	5-52

5-51	Test Screen	47	.....	.....	5-53
5-52	Test Screen	48	.....	.....	5-54
5-53	Test Screen	49	.....	.....	5-55
5-54	Test Screen	50	.....	.....	5-56
5-55	Test Screen	51	.....	.....	5-57
5-56	Test Screen	52	.....	.....	5-58
5-57	Test Screen	53	.....	.....	5-59
5-58	Test Screen	54	.....	.....	5-60
5-59	Test Screen	55	.....	.....	5-61
5-60	Test Screen	56	.....	.....	5-62
5-61	Test Screen	57	.....	.....	5-63
5-62	Test Screen	58	.....	.....	5-64
5-63	Test Screen	59	.....	.....	5-65
5-64	Test Screen	60	.....	.....	5-66
5-65	Test Screen	61	.....	.....	5-67
5-66	Test Screen	62	.....	.....	5-68
5-67	Test Screen	63	.....	.....	5-69
5-68	Test Screen	64	.....	.....	5-70
5-69	Test Screen	65	.....	.....	5-71
5-70	Test Screen	66	.....	.....	5-72
5-71	Test Screen	67	.....	.....	5-73
5-72	Test Screen	68	.....	.....	5-74
5-73	Test Screen	69	.....	.....	5-75
5-74	Test Screen	70	.....	.....	5-76
5-75	Test Screen	71	.....	.....	5-77
5-76	Test Screen	72	.....	.....	5-78
5-77	Test Screen	73	.....	.....	5-79
5-78	Test Screen	74	.....	.....	5-80
5-79	Test Screen	75	.....	.....	5-81
5-80	Test Screen	76	.....	.....	5-82
5-81	Test Screen	77	.....	.....	5-83
5-82	Test Screen	78	.....	.....	5-84
5-83	Test Screen	79	.....	.....	5-85
5-84	Test Screen	80	.....	.....	5-86
5-85	Test Screen	81	.....	.....	5-87
5-86	Test Screen	82	.....	.....	5-88
5-87	Test Screen	83	.....	.....	5-89

LIST OF TABLES

<u>Table</u>	<u>Title</u>	<u>Page</u>
4-1	Matrix Mapping FDFE Functions with Test Plan ...	4-2

SECTION 1

GENERAL

1.1 Purpose

This unit test plan establishes the methodology and procedures used to adequately test the capabilities of the computer program identified as the Forms Driven Form Editor known in this document as the FDFE. The FDFE is one configuration item of the Integrated Information Support System (IISS) User Interface (UI).

1.2 Project References

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- [2] Structural Dynamics Research Corporation, Form Editor User Manual, UM 620244400, 24 October 1986.
- [3] Structural Dynamics Research Corporation, Forms Driven Form Editor Development Specification, DS 620244402, 24 October 1986.
- [4] General Electric Company, System Design Specification, 7 February 1983.
- [5] Structural Dynamics Research Corporation, Form Processor Unit Test Plan, UTP620244200, 24 October 1986.
- [6] Structural Dynamics Research Corporation, Application Interface Unit Test Plan, UTP620244700, 24 October 1986.
- [7] Structural Dynamics Research Corporation, Virtual Terminal Interface Unit Test Plan, UTP620244300, 24 October 1986.
- [8] Structural Dynamics Research Corporation, Forms Language Compiler Unit Test Plan, UTP620244401, 24 October 1986.
- [9] Structural Dynamics Research Corporation, User Interface Services Unit Test Plan, UTP620244100, 24 October 1986.
- [10] Structural Dynamics Research Corporation, Report Writer Unit Test Plan, UTP620244501, 24 October 1986.
- [11] Structural Dynamics Research Corporation, Rapid Application Generator Unit Test Plan, UTP620244502, 24 October 1986.
- [12] Structural Dynamics Research Corporation, Text Editor Unit Test Plan, UTP620244600, 24 October 1986.

### 1.3 Terms and Abbreviations

American Standard Code for Information Interchange: (ASCII), the character set defined by ANSI X3.4 and used by most computer vendors.

Application Interface: (AI), subset of the IISS User Interface that consists of the callable routines that are linked with applications that use the Form Processor or Virtual Terminal. The AI enables applications to be hosted on computers other than the host of the User Interface.

Application Process: (AP), a cohesive unit of software that can be initiated as a unit to perform some function or functions.

Attribute: field characteristic such as blinking, highlighted, black, etc. and various other combinations. Background attributes are defined for forms or windows only. Foreground attributes are defined for items. Attributes may be permanent, i.e., they remain the same unless changed by the application program, or they may be temporary, i.e., they remain in effect until the window is redisplayed.

Device Drivers: (DD), software modules written to handle I/O for a specific kind of terminal. The modules map terminal specific commands and data to a neutral format. Device Drivers are part of the UI Virtual Terminal.

Display List: a list of all the open forms that are currently being processed by the FP or the user.

Extended Binary Coded Decimal Interchange Code: (EBCDIC), the character set used by a few computer vendors (notably IBM) instead of ASCII.

Field: two dimensional space on a terminal screen.

Form: structured view which may be imposed on windows or other forms. A form is composed of fields. These fields may be defined as forms, items, and windows.

Form Definition: (FD), forms definition language after compilation. It is read at runtime by the Form Processor.

Forms Definition Language: (FDL), the language in which electronic forms are defined.

Forms Driven Form Editor: (FDFE), subset of the FE which consists of a forms driven application used to create Form Definition files interactively.

Form Editor: (FE), subset of the IISS User Interface that is used to create definitions of forms. The FE consists of the Forms Driven Form Editor and the Forms Language Compiler.

Form Hierarchy: a graphic representation of the way in which forms, items and windows are related to their parent form.

Forms Language Compiler: (FLAN), subset of the FE that consists of a batch process that accepts a series of forms definition language statements and produces form definition files as output.

Form Processor: (FP), subset of the IISS User Interface that consists of a set of callable execution time routines available to an application program for form processing.

Form Processor Text Editor: (FPTE), subset of the Form Processor that consists of software modules that provide text editing capabilities to all users of applications that use the Form Processor.

IISS Function Screen: the first screen that is displayed after logon. It allows the user to specify the function he wants to access and the device type and device name on which he is working.

Integrated Information Support System: (IISS), a test computing environment used to investigate, demonstrate and test the concepts of information management and information integration in the context of Aerospace Manufacturing. The IISS addresses the problems of integration of data resident on heterogeneous data bases supported by heterogeneous computers interconnected via a Local Area Network.

Item: non-decomposable area of a form in which hard-coded descriptive text may be placed and the only defined areas where user data may be input/output.

Message: descriptive text which may be returned in the standard message line on the terminal screen. They are used to warn of errors or provide other user information.

Message Line: a line on the terminal screen that is used to display messages.

Network Transaction Manager: (NTM), IISS subsystem that performs the coordination, communication and housekeeping functions required to integrate the Application Processes and System Services resident on the various hosts into a cohesive system.

Open List: a list of all the forms that are currently open for an application process.

Operating System: (OS), software supplied with a computer which allows it to supervise its own operations and manage access to hardware facilities such as memory and peripherals.

Page: instance of forms in windows that are created whenever a form is added to a window.

Paging and Scrolling: a method which allows a form to contain more data than can be displayed with provisions for viewing any portion of the data buffer.

Physical Device: a hardware terminal.

Qualified Name: the name of a form, item or window preceded by the hierarchy path so that it is uniquely identified.

Subform: a form that is used within another form.

User Data: data which is either input by the user or output by the application programs to items.

User Interface: (UI), IISS subsystem that controls the user's terminal and interfaces with the rest of the system. The UI consists of two major subsystems: the User Interface Development System (UIDS) and the User Interface Management System (UIMS).

User Interface Development System: (UIDS), collection of IISS User Interface subsystems that are used by applications programmers as they develop IISS applications. The UIDS includes the Form Editor and the Application Generator.

User Interface Management System: (UIMS), the runtime UI. It consists of the Form Processor, Virtual Terminal, Application Interface, the User Interface Services and the Text Editor.

User Interface Monitor: (UIM), part of the Form Processor that handles messaging between the NTM and the UI. It also provides authorization checks and initiates applications.

User Interface Services: (UIS), subset of the IISS User Interface that consists of a package of routines that aid users in controlling their environment. It includes message management, change password, and application definition services.

User Interface/Virtual Terminal Interface: (UI/VTI), another name for the User Interface.

Virtual Terminal: (VT), subset of the IISS User Interface that performs the interfacing between different terminals and the UI. This is done by defining a specific set of terminal features and protocols which must be supported by the UI software which constitutes the virtual terminal definition. Specific terminals are then mapped against the virtual terminal software by specific software modules written for each type of real terminal supported.

Window: dynamic area of a terminal screen on which predefined forms may be placed at run time.

Window Manager: a facility which allows the following to be manipulated: size and location of windows, the device on which an application is running, the position of a form within a window. It is part of the Form Processor.

## SECTION 2

### DEVELOPMENT ACTIVITY

#### 2.1 Statement of Pretest Activity

During system development, the computer programs were tested progressively. Functionality was incrementally tested and as bugs were discovered by this testing, the software was corrected.

Each form used by the FDFE was individually tested. This testing was conducted by the individual program developer in a manual mode. The developer would manually enter data onto the screen and observe the results. Any errors were noted by the developer and corrections to the program were then made after a testing session.

#### 2.2 Pretest Activity Results

Each testing of the forms used in the FDFE application discovered a few minor bugs which were then corrected and retesting proved successful. Testing included exceptional conditions and error conditions for data entered on the forms. The overall test results during development showed no major programming errors. Only minor bugs were discovered and corrected.

SECTION 3

SYSTEM DESCRIPTION

3.1 System Description

The FDFE interfaces directly with users as an application which uses the Form Processor (FP) - via the NTM. Physical terminals are assumed to have video display, a textual keyboard, four cursor positioning keys or key sequences, a help key or key sequence, a message key, an entry key, a quit key and four other keys to be used by the FDFE for special processing (see section 5.3). The FDFE must interface with the following software tools: the Forms Processor (FP), the Forms Compiler (FLAN), C language runtime routines and forms storage management. It is used to create or modify FDL files and to create new FD files; it can also be used to delete existing FDL and FD files as well as to rename existing FDL files (see Figure 3-1).

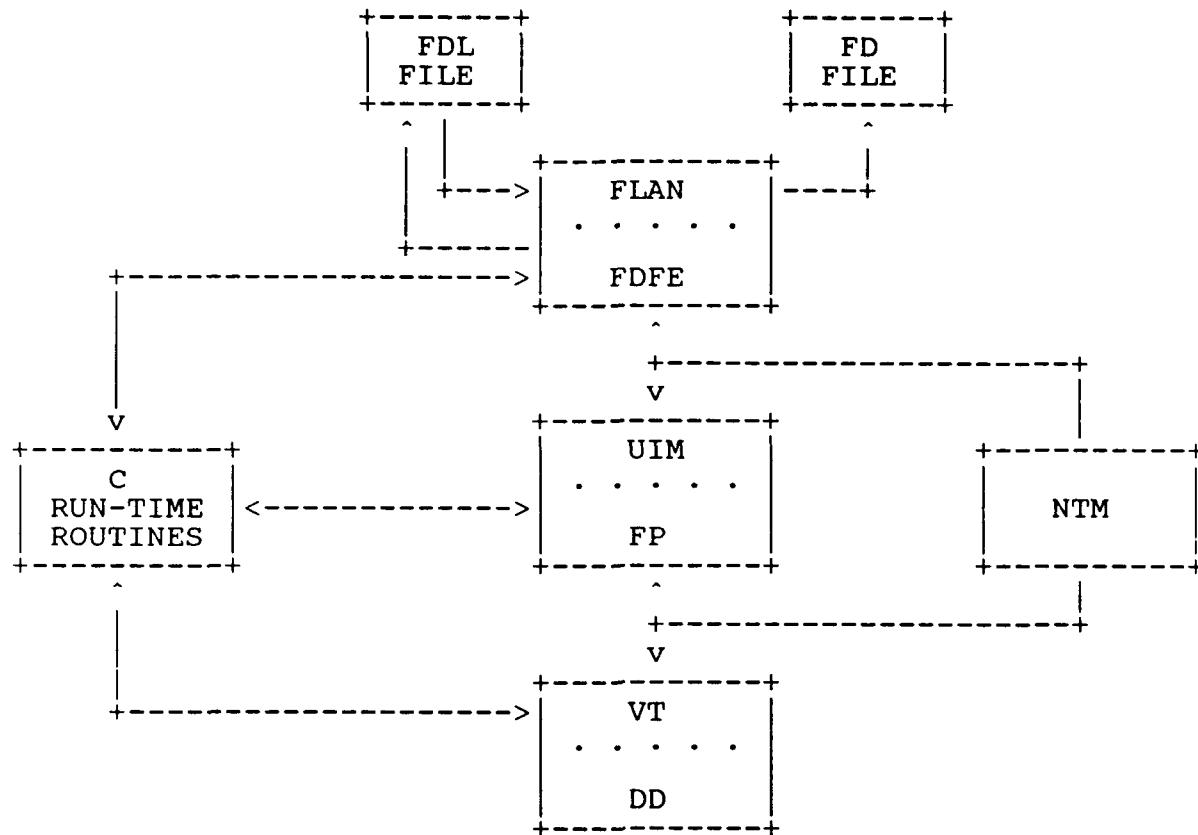


Figure 3-1 Interface Block Diagram

### 3.2 Testing Schedule

The execution of the FDFE is dependent upon the NTM subsystem of IISS and testing of the FDFE must be done only after the NTM has been successfully tested. Within the UI subsystem, the FDFE uses the FP, VT, AI and FLAN and must be tested only after they have been successfully tested.

### 3.3 First Location Testing

These tests of the FDFE require the following:

Equipment: Air Force VAX, or IBM terminal supported by the VT as listed in the the UI Terminal Operator Guide.

Support Software: The Integrated Information Support System, the Oracle database management system, and C run-time libraries.

Personnel: One integrator familiar with the UIS.

Training: FDFE manuals have been previously provided with the past release.

Deliverables: The FDFE subsystem of the UI.

Security considerations: None.

#### 3.3.1 Test Materials on VAX

Test Materials: This test is interactive and can be manually performed as outlined in this test plan. It also could be run as a script file if so desired (see below).

### 3.4 Subsequent Location Testing on VAX

The requirements as listed above need to be met; however, in subsequent testing it may be advantageous to create a script file of the outlined tests and run this saving the output of the test for future comparisons.

SECTION 4

TEST SPECIFICATIONS AND EVALUATIONS

4.1 Test Specification

The following functionality of the FDFE is demonstrated by the test outlined in section 5:

- 1) Insert a Form Language Source
  - A) Insert Form into Forms Language Source
    - a) Layout Edit mode
    - b) Single Field Edit mode
    - c) Icon Edit mode
  - B) Modify Form in Forms Language Source
    - a) Single Field Edit mode
- 2) Modify a Form Language Source
  - A) Insert Form into Forms Language Source
    - a) Layout Edit mode
  - B) Modify Form in Forms Language Source
    - a) Single Field Edit mode
    - b) Icon Edit mode
  - D) Drop a Form from Forms Language Source
  - E) List Forms in Forms Language Source
  - F) Write and Compile Forms Language Source
- 3) Select a Form Language Source
  - A) Layout Edit mode
  - B) Icon Edit mode
- 4) Display Compiled Form Definition
- 5) Copy Form Language Source to New Form Language Source
- 6) Rename Form Language Source to New Form Language Source
- 7) Drop Form Language Source
- 8) Drop Form Language Object
- 9) List Form Language Sources (FDL files)
- 10) List Form Language Objects (FD files)
- 11) Exit

Table 4-1 shows the direct correspondence between the test (the steps outlined in Section 5) and the functional requirements as listed in this section. These functions directly correspond to the detailed functional requirements of the Forms Driven Form Editor Development Specification. The '..' indicates the figures which illustrate the testing of the top level functions: insert, modify or select a forms language source file. The '\*' indicates the figures which illustrate the testing of specific functions.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
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1.A.b	.		*																				
1.B	.			*																			
1.C	.				*																		
2.A						.	*																
2.B.a							.	*															
2.B.b								*															
2.C							.		*														
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9													*										
10													.	*									
11														*									

Table 4-1 Matrix mapping FDFE functions with test plan  
Key for Table 1:

A = figures: 06-207  
B = figures: 08-12  
C = figures: 23-203  
D = figures: 13-22  
E = figures: 205-206  
F = figures: 211-246  
G = figures: 231-235  
H = figures: 213-225  
I = figures: 226-230  
J = figures: 239-240  
K = figures: 236-238, 241-243  
L = figures: 244-246  
M = figures: 250-258,  
N = figures: 255-257  
O = figures: 252-254  
P = figures: 208-210, 247-249  
Q = figures: 259-260  
R = figures: 261-262  
S = figures: 263-264  
T = figures: 265-266  
U = figures: 267-269  
V = figures: 270-272  
W = last instruction

#### 4.2 Testing Methods and Constraints

The tests as outlined in Section 5 must be followed. The required input is stated for each test. This testing tests the normal mode of operation of these functions and does not completely exercise all the error combinations that a user of the FDFE might create by faulty entry of form field information. These tests have been done, however, through the normal testing done by the developer of these functions. IISSULIB and IISSLIB should point to default directory. No additional constraints are placed on this unit test besides those listed in Section 3.2 and 3.3 of this unit test plan.

#### 4.3 Test Progression

The progression of testing of the FDFE is fully outlined in Section 5 of this unit test plan. This progression should be followed exactly to insure the successful testing of this IISS configuration item.

#### 4.4 Test Evaluation

The test results are evaluated by comparing the information returned on the various output screens to that specified as successful for the given test. As outlined below in section 5, each test of FDFE functionality provides an input screen with the required data entry specified and the resulting output for a successful test. The only differences found should be the date and time stamps on the IISS Function Screen (Figure 5-3).

##### 4.4.1 Test Evaluation on the VAX

To speed up this testing, scripting can be used. If scripting is used, the script file FDFEUTP.SCP and its released test saved output FDFEUTP.SAV (Under IISS Configuration Management) should be copied to your test directory. To execute the scripting option type "-RFDFEUTP.SCP -SFDFETST.SAV" when you activate the User Interface. For example:

```
$VT100 -RFDFEUTP.SCP -SFDFETST.SAV
```

To compare the results with those obtained by SDRC, compare FDFETST.SAV with FDFEUTP.SAV using the command file DIFFILE.COM (Under IISS Configuration Management).

## SECTION 5

### TEST SPECIFICATIONS AND EVALUATIONS

#### 5.1 Test Description

This test consists of creating an FDL source file using the FDFE and then using this file to perform all functions.

#### 5.2 Test Control

As outlined, this unit test is a manual test which may be done by anyone. The required input data for each function being tested, the resulting successful output and the order of the testing are completely specified below. The test control information is completely described in Section 4.4. Accurate observation of the resulting successful output must be made to ensure the unit test was done properly. As noted in Section 4.4 above scripting may be used instead of the manual test described below.

#### 5.3 Test Procedures

##### 5.3.1 Keypad Function

The test of the FDFE application consists of individually testing each function provided by the FDFE. The following keys are generally used to move within forms (using the VT100 terminal as an example): the <ENTER> key is used to activate all commands; the <QUIT> key is used to go back to previous activity without taking current action; the <TAB> key is used to move from field to field within the form; and the arrow keys are used to move within fields. In addition, ESC TAB is a reverse TAB. The only application defined function keys used by the FDFE are: the function key (PF 15 on a VT100) which when in layout mode is used to transfer control to layout description mode and back again; the function key (PF 12 on a VT100) which when in layout mode is used to move fields around on a form; and two function keys which when in edit field mode or layout description mode are used to go to the previous and the next field on a form (PF 16 and PF 17 respectively on a VT100).

PF 1 MODE KEY	PF 2 HELP KEY	PF 3 MESSAGE QUEUE KEY	PF 4 QUIT KEY
PF 5	PF 6	PF 7	PF 8
PF 9	PF 10	PF 11	PF 12 Move fields on form in layout mode
PF 13	PF 14	PF 15 Go to dscpt. mode \ back to layout md	PF 0
PF 16 While in dscpt mode or edit field mode these keys used to scroll through fields on a form PF 16 = < \ PF 17 = >	PF 17	ENTER KEY	

Figure 5-1 Keypad Layout

#### 5.3.1.1 Keypad on VAX

The function key locations are mapped 1:1 to the generic layout shown in Figure 5-1.

#### 5.3.1.2 Keypad on IBM

The generic keypad must be mapped to the terminal that you are using. PA2 is used to shift to the PF 13 to PF24 set. The PF0 key (ENTER) is the <RETURN> key.

#### 5.3.2 Test Procedures on VAX

To run the unit test plan in the VAX/VMS environment as outlined below, one must be logged on to an IISS account. The NTM must be up and running and the UI logical names IISSFLIB, IISSULIB, IISSSLIB and IISSMLIB must be set properly at the

group level. IISSFLIB points to the directory containing system form definitions (FD files). IISSULIB points to the directory containing the user's form definitions (FD files). IISSSLIB points to the directory containing the user's form definition source files (FDL files). IISSMLIB points to the directory containing error and help messages (MSG files). To perform this test IISSULIB and IISSSLIB must be pointing to the default directory.

Assuming the NTM is up and running, an IISS user may start the test using scripting as follows:

```
$ SET DEF <to directory containing NTM environment>
$ VT100 -RFDFEUTP.SCP -SFDFETST.SAV
```

These commands start up the VT100 device driver with a source script as input and specify a save file for the results of the test.

If the User Interface system has been installed at your site with a different device driver, then this step is amended as appropriate. The test begins executing on the terminal. The results of this test are saved in the current directory in the file FDFEUTP.SAV. To execute this test manually enter only "VT100" at the second '\$'. This brings up the IISS Logon Screen as shown in Figure 5-2. The inputs and outputs for the test are illustrated by examining the screens shown in section 5.3.4.

### 5.3.3 IBM Test Procedures

Partitioned datasets must be allocated for each of the following symbolic names: iiessslib, iissfplib, iiissulib, tmplis and iiissmlib. Each of the datasets should be compressed before testing. Additionally, it is recommended that the following dataset characteristics and minimum space allocations be used:

iiessslib	Variable blocked with LRCL 80, BLKSIZE 3120, and 10 tracks with 5 directory blocks.
iissfplib, iiissulib, tmplis	Variable blocked with LRCL 80, BLKSIZE 3120, and 15 tracks with 15 directory blocks.
iiissmlib	Fixed block with LRECL 73, BLKSIZE 730, and 3 tracks with 2 directory blocks.

NOTE that the BATIIS JCL that is run to bring up the NTM preallocates these datasets.

Assuming the NTM is up and running, an IISS user may start this test by accessing the IISS environment. To do this, enter "LOGON APPLID(IISSI)" at the ENTER APPLICATION: prompt. The "i" following IISS must be your IISS instance id as specified in the NTM SYSGEN file. This starts up the IBM3270 device driver and brings up the IISS Logon Screen as shown in Figure 5-2. Proceed as described in the following section.

#### 5.3.4 Testing the FDFE

On either an IBM or VAX host, when the User Interface is activated, the following form appears:

USER ID: _____	
PASSWORD: _____	
ROLE: _____	
Msg: 0	application

Figure 5-2 IISS Logon Screen

- (1) USER ID is input as "MORENC".
- (2) PASSWORD is input as "STANLEY".

(3) ROLE is input as "MANAGER".

When this form is correctly completed and the <ENTER> key is pressed, the IISS Function Screen is displayed.

I I S S   T E S T   B E D   V E R S I O N   3			
DATE: <u>  /  /  </u>	TIME <u>  :  :  </u>	USER ID: <u>          </u>	ROLE: <u>          </u>
FUNCTION: <u>          </u>	DEVICE TYPE: <u>          </u>	DEVICE NAME: <u>          </u>	
Msg: 0		application	

Figure 5-3 IISS Function Screen

To invoke the FDFE enter:

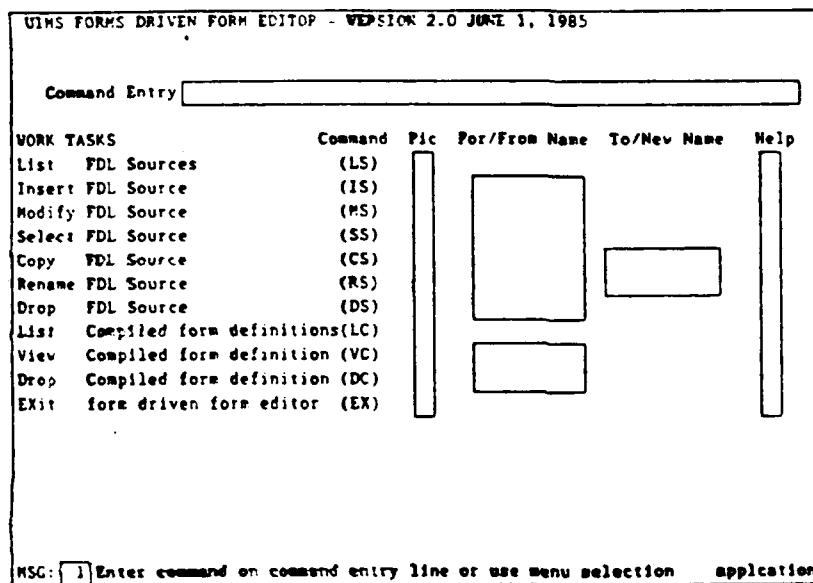


Figure 5-4 Invoking the FDFE

The result should be.

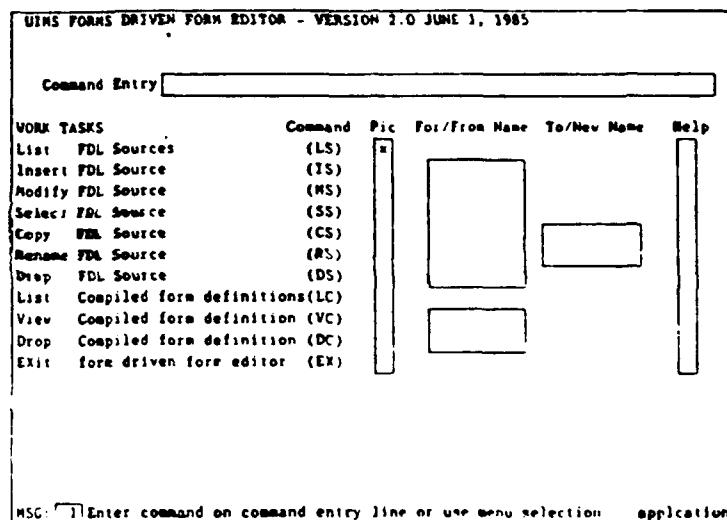


Figure 5-5 First FDFE Screen - Test Screen 1

To test inserting a form into an FDL file enter:

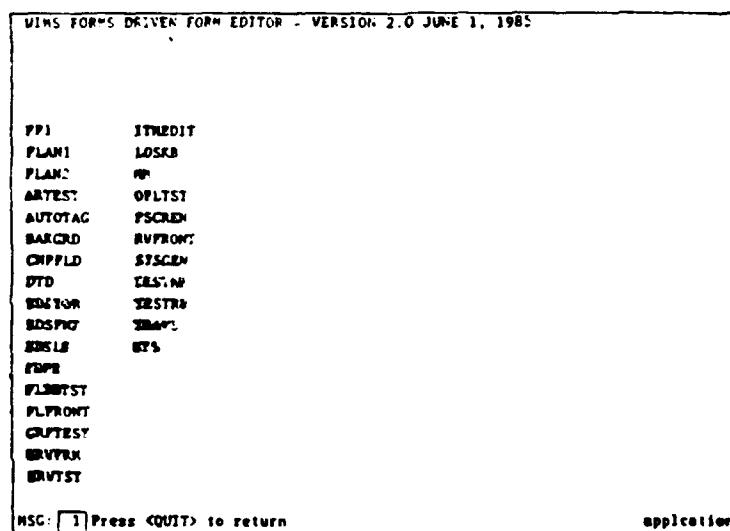


Figure 5-6 Test Screen 2

The following screen should appear.

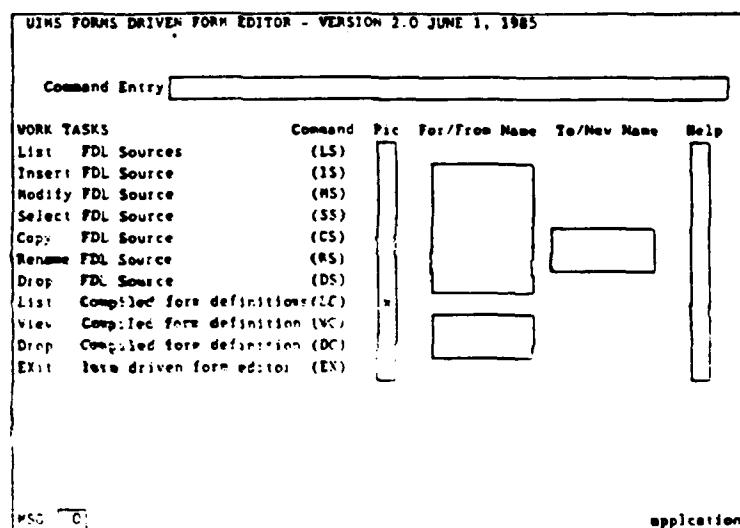


Figure 5-7 Test Screen 3

UTP620344402  
30 September 1990

If the following is entered on the edit task menu screen,

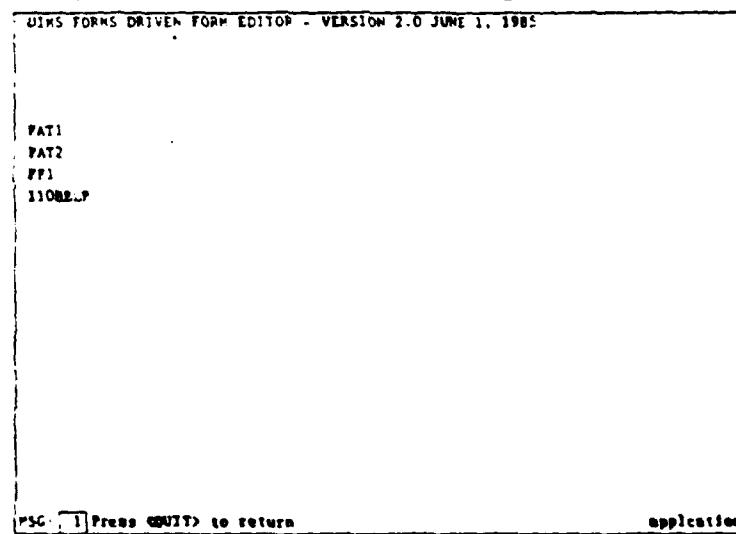


Figure 5-8 Test Screen 4

The following screen should appear.

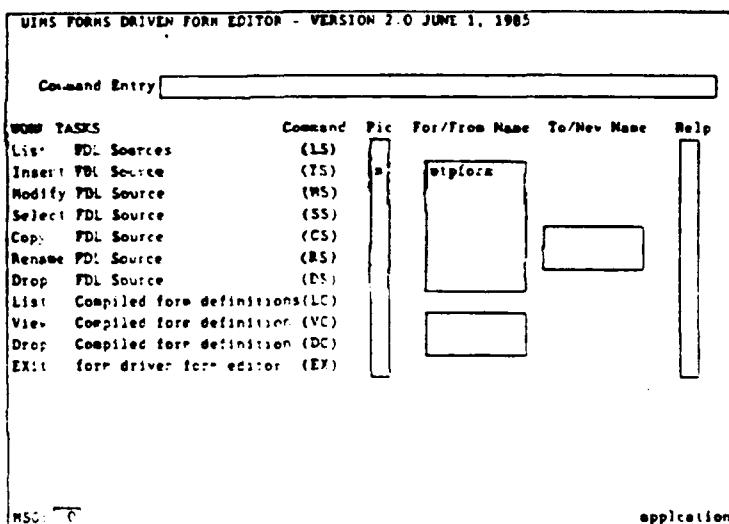


Figure 5-9 Test Screen 5

If the following is entered,

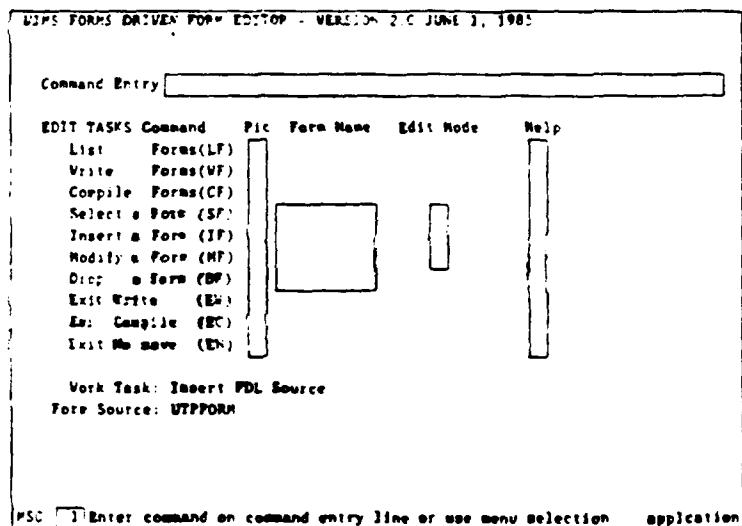


Figure 5-10 Test Screen 6

The following screen should appear.

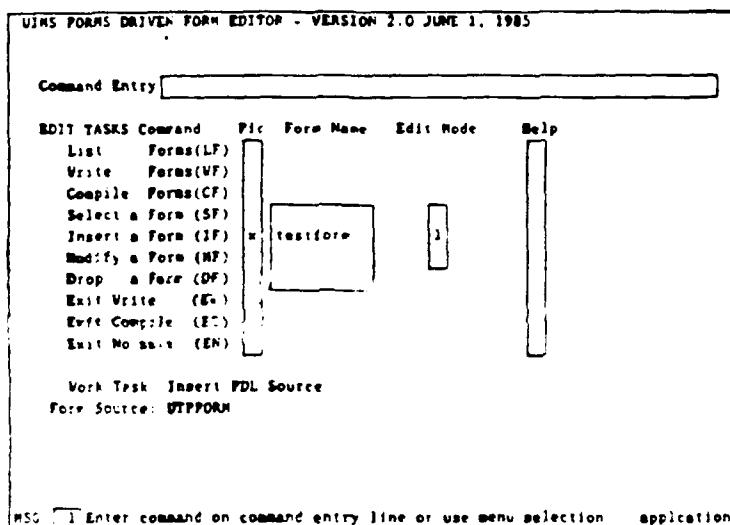


Figure 5-11 Test Screen 7

UTP620344402  
30 September 1990

To return to edit task menu screen press the <QUIT> key. The result should be.

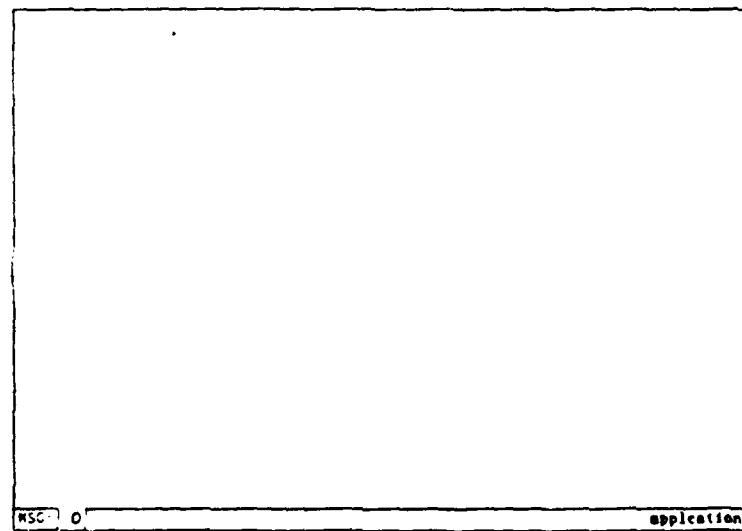
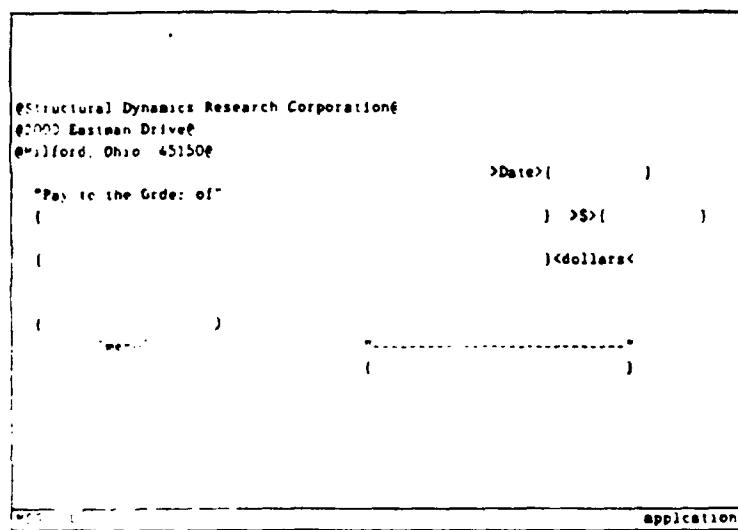


Figure 5-12 Test Screen 8

If the following is entered on the edit task menu screen,



Structural Dynamics Research Corporation  
2000 Eastman Drive  
Milford, Ohio 45150

"Pay to the Order of" >Date>{ }  
( ) >\$>{ }  
( ) <dollars<  
( ) .....  
( )

application

Figure 5-13 Test Screen 9

The following screen should appear.

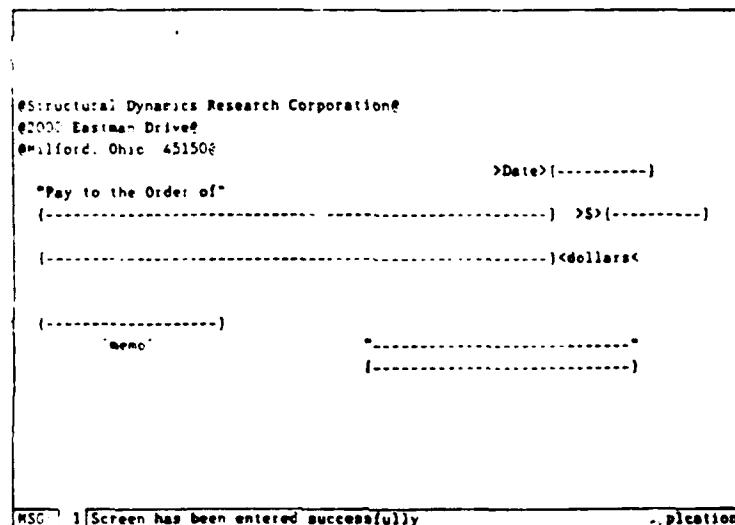


Figure 5-14 Test Screen 10

If the following is entered and <pf17> is pressed,

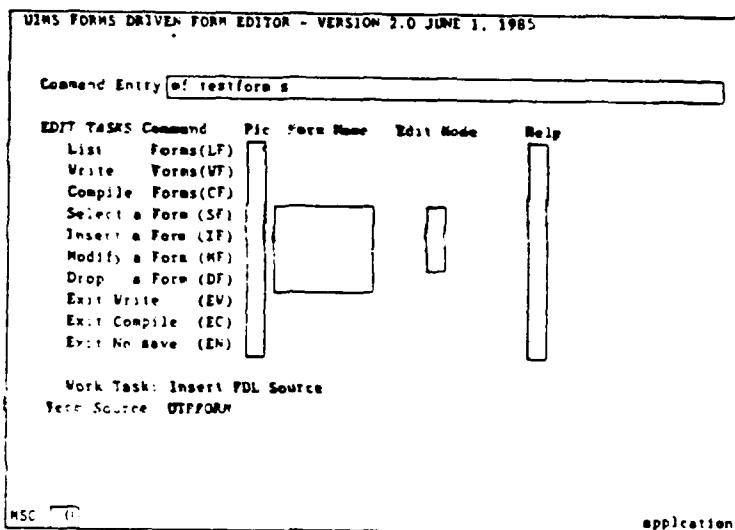


Figure 5-15 Test Screen 11

The following screen should appear.

**FIELD EDIT MODE**

For FDL File UTPFORM

TASK	Form
Field	
Type	
Direct	
Get FDL	

FORM TESTFORM

Size	0 by 0
Background	BLACK
Prompt	Structural Dynamics Resea
Row	5
Column	3

**REQUIRED:**

FIELD	Type
Row	Column
Size	By
Display	
Background	

**OPTIONAL:**

Display	Field
Actual	Repetition
Direction	<->
Spacing	
Prompt	
Text	Row Col

**ITER ONLY:**

Identify	Base Type	RDY Value
Case	Enter/Exit	RDY Value

MSG:  Enter task and field to be acted on application

Figure 5-16 Test Screen 12

If the following is entered,

**FIELD EDIT MODE**

For FDL File UTPFORN

TASK	0
Field	
Type	a
Direct	b
Get FDL	Form

**FORK TESTFORN**

Size	0 b) 0
Background	BLACK
Prompt	Structural Dynamics Resea
Row	5 Column 3

**REQUIRED:**

FIELD	Type
Row	Column
Size	By
Display/	
Background	

**OPTIONAL:**

Display	Field
Actual	Repetition
Direction	<->
Spacing	
Prompt	
Pos	Pro Cc

**ITEM ONLY:**

Justify	Data Type	Min Value	Max Value
Case	Enter/Fill		

MSG:  Enter task and field to be acted on application

Figure 5-17 Test Screen 13

The following screen should appear.

**FIELD EDIT MODE**

For PDL File UTPFORM

TASK  M

Field

Type  A

Direction  E

Get PDL  Form

RECIPIENT:

FIELD  FLD 17 40 Type  I  
Row  17 Column  40  
Size  30 By  1  
Display  INPUT  
Background

ITEM ONLY:

Actual  Data Type  C MIN Value   
Cast  Enter/Full  MAX Value

OPTIONAL:

FORM TESTFORM  
Size  0 by  0  
Background  BLACK  
Prompt  Structural Dynamics Resed  
Row  5 Column  3

Prompt   
Pos  TC Row 36 Col 41

MSG  Make Your Modifications now

application

Figure 5-18 Test Screen 14

If <pf17> is pressed the following screen should appear.

**FIELD EDIT MODE**

For FDL File UTPFORM

TASK	M
Field	<input type="text"/>
Type	A
Direct	B
Get FDL	<input type="text"/>
Form	<input type="text"/>

FORM TESTFORM

Size	0 by 0
Background	BLACK
Prompt	Structural Dynamics Resea
Row	5
Column	3

**REQUIRED:**

FIELD	<input type="text"/> signature	Type	I
Row	17	Column	40
Size	30	By	2
Display/	INPUT	Background	

**OPTIONAL:**

Display	<input type="text"/>	Field	<input type="text"/>
Actual	<input type="text"/>	Repetition	<input type="text"/>
Direction	<input type="text"/>	Spacing	<input type="text"/>

Prompt:   
Pos: 7C Row: 16 Col: 41

**ITEM ONLY:**

Justify	<input type="text"/>	Data Type	C	MIN Value	<input type="text"/>
Case	<input type="text"/>	Enter Fill	<input type="text"/>	MAX Value	<input type="text"/>

PSF  Make Your Modifications now  application

Figure 5-19 Test Screen 15

UTP620344402  
30 September 1990

If the following is entered,

**FIELD EDIT MODE**

For FDL File UTPF00A

**TASK #**  **FORM**  **FIELD**  **TYPE**  **Size**  **0** **0**  
**Field**  **Type**  **Size**  **0** **0**  
**Type**  **0** **0**  
**Dir:**  **1** **0** **0**  
**Size:**  **1** **0** **0**  
**Get FDL**  **Form**   
  
**REQUIRED:**  
**FIELD**  **SIGNATURE** **Type**  **1**  
**Rev:**  **17** **Column**  **40**  
**Size**  **30** **By**  **1**  
**Display/**  **INPUT**  
**Background**   
  
**OPTIONAL:**  
**Display**  **Field**  
**Actual**  **Repetition**  
**Direction**  **<->**  
**Spacing**   
  
**Prompt:**   
**Form**  **TC** **Rev**  **16** **Col**  **41**  
  
**ITEM ONLY:**   
  
**Do It**  **Do's Type**  **C** **MIN Value**   
**Case**  **Enter/Fill**  **MAX Value**   
  
**MSG:**  **Field was successfully modified** **application**

Figure 5-20 Test Screen 16

The following screen should appear.

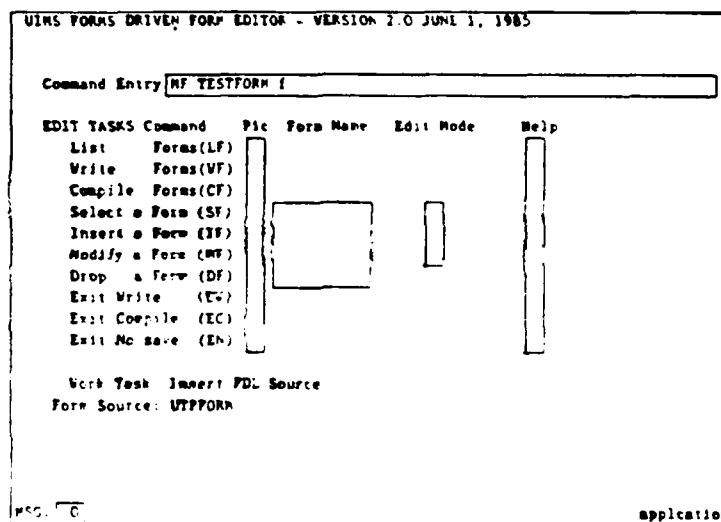


Figure 5-21 Test Screen 17

UTP620344402  
30 September 1990

To return to edit task menu screen press the <QUIT> key. The result should be.

FORM EDIT MODE

For FDL File <b>UTPFORM</b>	FORM <b>TESTFORM</b>
TASK <input type="text"/>	Size <input type="text"/> by <input type="text"/>
Type <input type="text"/>	Background <input type="text"/>
Get FDL <input type="text"/> Form <input type="text"/>	Prompt <input type="text"/> <input type="text"/> <input type="text"/>
Row <input type="text"/> Column <input type="text"/>	
-- Field Characteristics Table --	

MSG:  Enter task and type of fields to be acted on application

Figure 5-22 Test Screen 18

If the following is entered on the edit task menu screen,

FORM EDIT MODE

For PDL File UTPFORM

TASK	Form
Type	8
Get FDL	Form

FORM TESTFORM

Size  by  Background: BLACK

Prompt:  Dynamics  Row  Column

-- Field Characteristics Table --

MSG  application

Figure 5-23 Test Screen 19

The following screen should appear.

FORM EDIT MODE

For FDL File UTPFORM

TASP  Type A  Form

Get FDL  Form

FORM TESTFORM

Size  by  Background  BLACK

Prompt  Structural Dynamics Reses

Row  Column

-- Field Characteristics Table --

Field Name	Row	Col	Size	Display	Day	Act	D	Sp	Prompt	Pos
SIGNATURE	1	37	40	30	1	INPUT				TC
FLD_33_04	1	15	4	21	1	INPUT				BC
FLD_12_04	1	12	4	37	1	INPUT				RT
FLD_30_66	1	10	66	12	1	INPUT				LT
FLD_10_04	1	10	4	57	1	INPUT				LT
FLD_08_60	1	8	60	12	1	INPUT				LT

Save

MSC  Make Your Modifications now

application

Figure 5-24 Test Screen 20

UTP620344402  
30 September 1990

If cursor is placed where marked below and <pf16> is pressed,

FORM EDIT MODE

For FDL File UTPFORM

Task	H
Type	A
Get FDL	Form

FORM TESTFORM

Size	0 by 0
Background	BLACK
Prompt	Structural Dynamics Resea
Row	3 Column 3

-- Field Characteristics Table --

Field Name	T	Row	Col	Size	Display	Dsp Act	D Sp	Prompt	Pos
SIGNATURE	1	17	40	30	1	INPUT			TC
memo	1	15	4	21	1	INPUT			BC
dollars	1	12	4	37	1	INPUT			RT
amount	1	10	65	12	1	INPUT			LT
pay_to	1	10	4	37	1	INPUT			LT
chk_date	1	8	65	12	1	INPUT			

1. NOTE - -

MSD 1 Make Your Modifications now

application

Figure 5-25 Test Screen 21

The result should be.

FORM EDIT MODE

For FDL File UTPFORM

TASV:  Form:

Type:  Get FDL:

FORM TESTFORM

Size:  by  Background:

Prompt:  Row:  Column:

-- Field Characteristics Table --

Item name: <input type="text" value="Help Message"/>
SIGNATURE: <input type="text"/>
MEMO: <input type="text"/>
DOLLARS: <input type="text"/>
AMOUNT: <input type="text"/>
PAT_TO: <input type="text"/>
CER_DATE: <input type="text"/>

More...

MSG:  application

Figure 5-26 Test Screen 22

If cursor is placed where marked below and <pf16> is pressed,

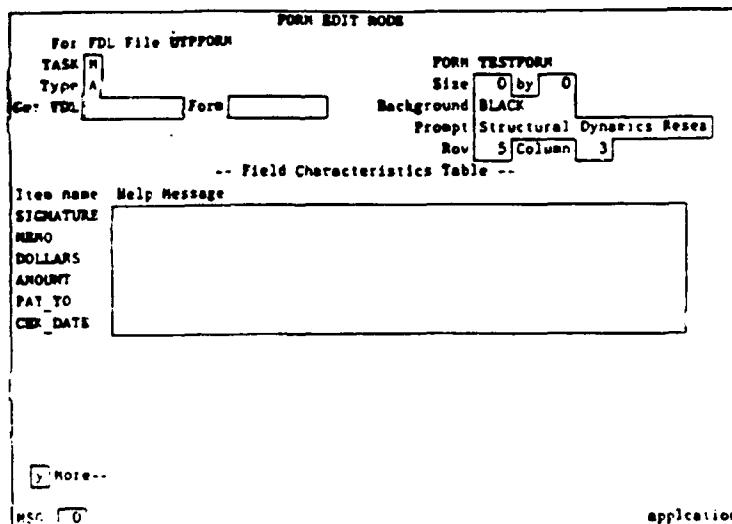


Figure 5-27 Test Screen 23

The result should be.

FORM EDIT MODE

For FDL File UTPFORM

TASK **M**  
Type: A

Get FDL  Fore  Background  BLACK

Size  0 by  0  
Prompt  Structural Dynamics Resea  
Row  5 Column  3

-- Field Characteristics Table --

Item Name	Item Value
SIGNATURE	<input type="text"/>
MEMO	<input type="text"/>
DOLLARS	<input type="text"/>
AMOUNT	<input type="text"/>
PAT_TPC	<input type="text"/>
CHE_DATE	<input type="text"/>

More--

MSG:  0 application

Figure 5-28 Test Screen 24

If cursor is placed where marked below and <ENTER> is pressed,

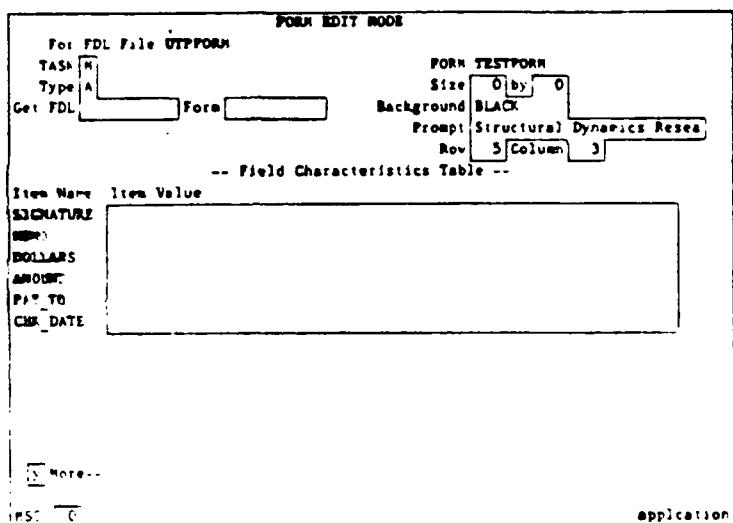


Figure 5-29 Test Screen 25

UTP620344402  
30 September 1990

The result should be.

**FORM EDIT MODE**

For FDL File **67PPFORM**

TASV  Type A

Get FDL  Form

**FORM TESTFORM**  
 Size  by   
 Background  BLACK  
 Prompt  Structural Dynamics Resea  
 Rev  Column   
 3

**-- Field Characteristics Table --**

Item Name	Just:	Case	Type	E/P Min	Max
SIGNATURE	<input type="text"/>	<input type="text"/>	<input type="text"/> C	<input type="text"/>	<input type="text"/>
MEMO	<input type="text"/>	<input type="text"/>	<input type="text"/> C	<input type="text"/>	<input type="text"/>
DOLLARS	<input type="text"/>	<input type="text"/>	<input type="text"/> C	<input type="text"/>	<input type="text"/>
AMOUNT	<input type="text"/>	<input type="text"/>	<input type="text"/> C	<input type="text"/>	<input type="text"/>
FROM TO	<input type="text"/>	<input type="text"/>	<input type="text"/> C	<input type="text"/>	<input type="text"/>
CHEK DATA	<input type="text"/>	<input type="text"/>	<input type="text"/> C	<input type="text"/>	<input type="text"/>

Figure 5-30 Test Screen 26

If <pf5> is pressed, the result should be.

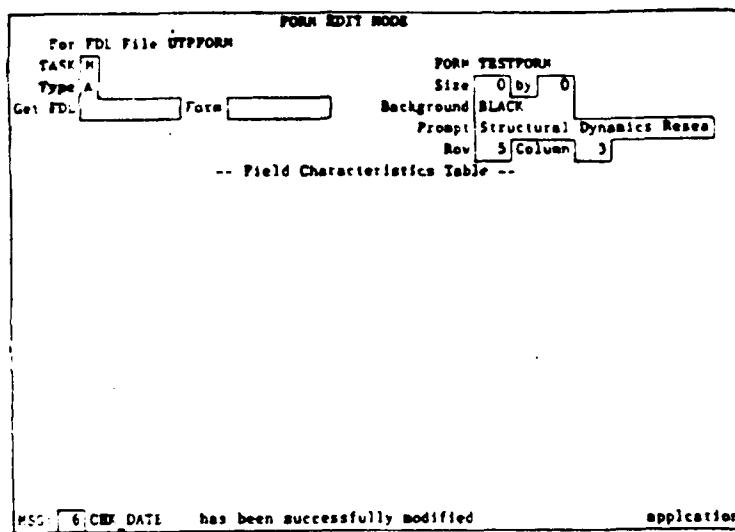


Figure 5-31 Test Screen 27

UTP620344402  
30 September 1990

If <pf8> is pressed, the result should be.

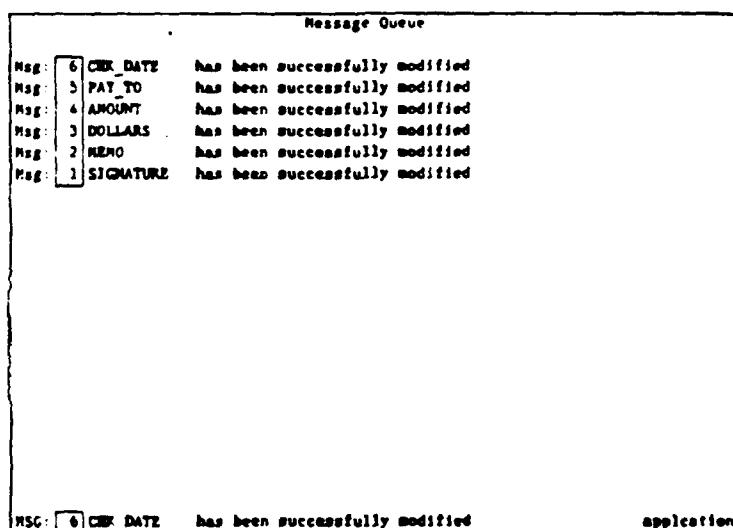


Figure 5-32 Test Screen 28

If <pf6> is pressed, the result should be.

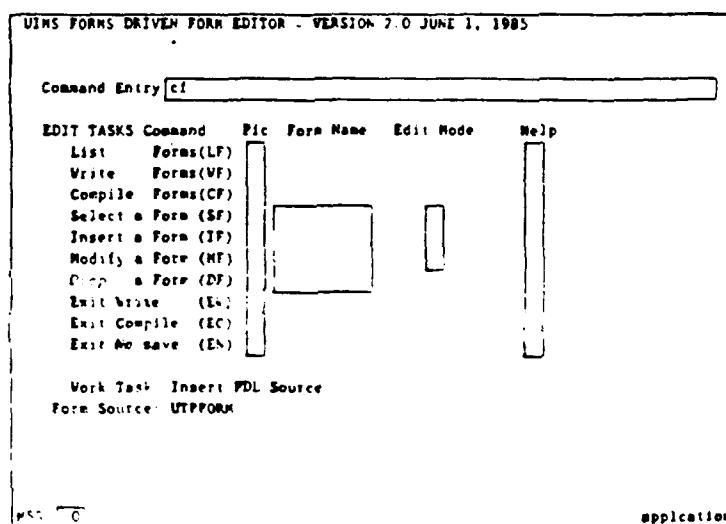


Figure 5-33 Test Screen 29

UTP620344402  
30 September 1990

If <pf7> is pressed, the result should be.

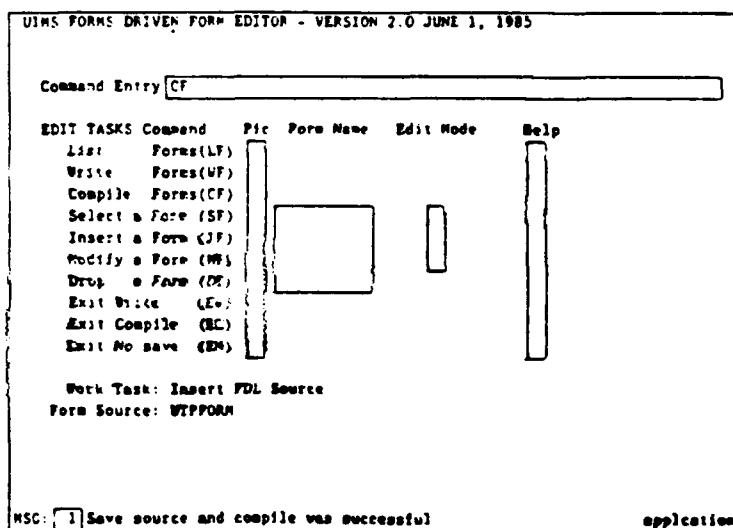


Figure 5-34 Test Screen 30

If the following is entered,

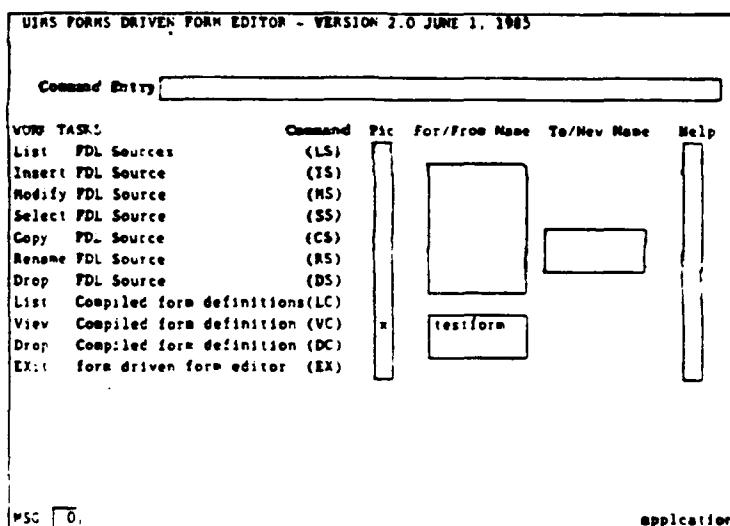


Figure 5-35 Test Screen 31

UTP620344402  
30 September 1990

The result should be.

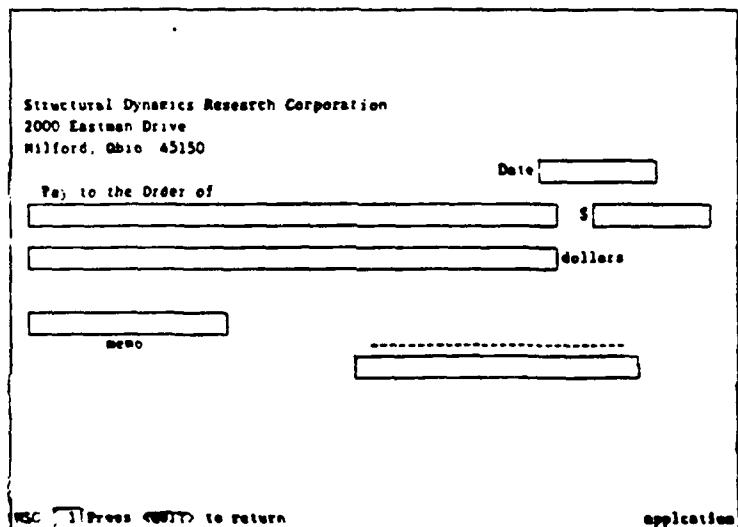


Figure 5-36 Test Screen 32

If <pf10> is press, the result should be.

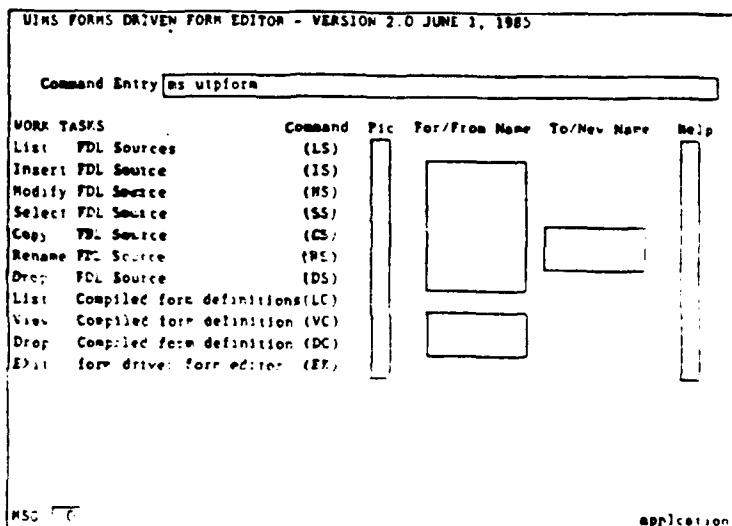


Figure 5-37 Test Screen 33

UTP620344402  
30 September 1990

If <pf10> is pressed, the result should be.

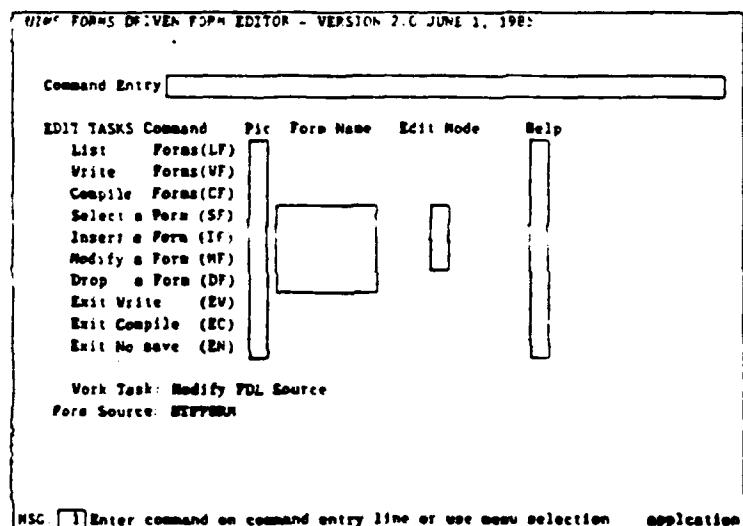


Figure 5-38 Test Screen 34

If <pf10> is pressed, the result should be.

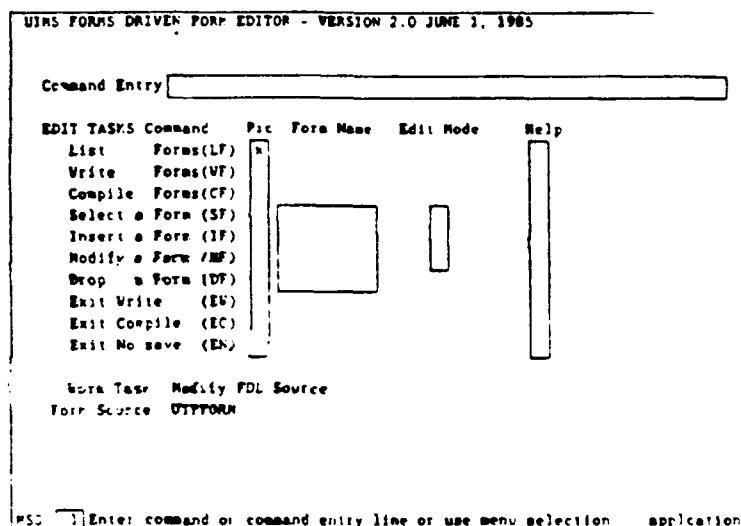


Figure 5-39 Test Screen 35

UTP620344402  
30 September 1990

If <pf10> is pressed, the result should be.

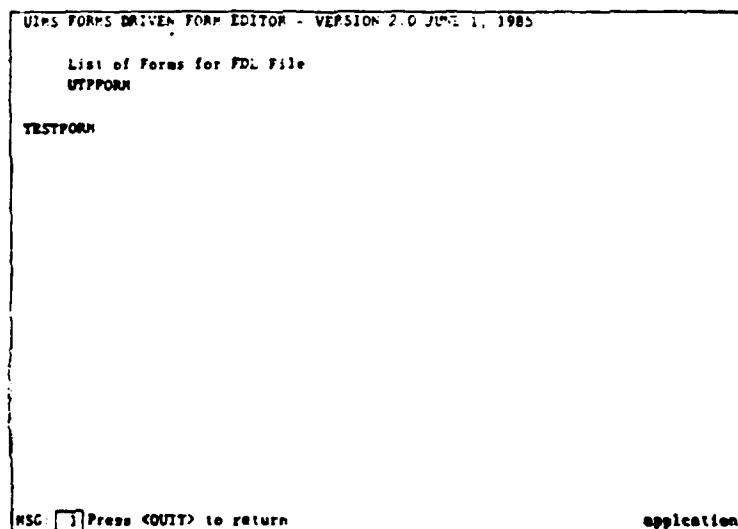


Figure 5-40 Test Screen 36

If the following is entered,

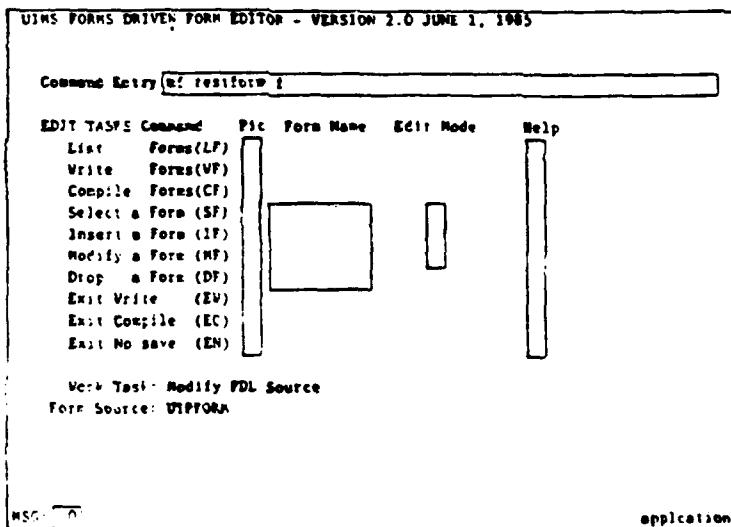


Figure 5-41 Test Screen 37

The result should be.

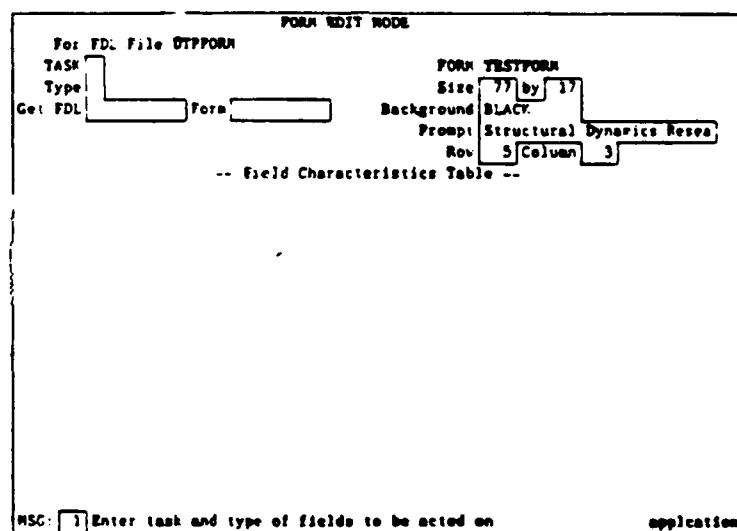


Figure 5-42 Test Screen 38

If cursor is placed where marked below and <pf16> is pressed,

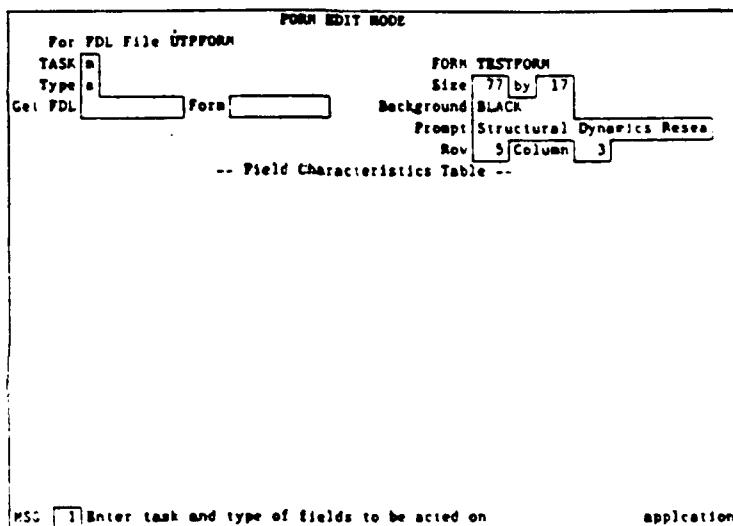


Figure 5-43 Test Screen 39

The result should be.

FORM EDIT MODE

For FDL File UTPFORM  
TAS:  Type: A  
Get FDL  Fore  Background BLACK  
Prompt: Structural Dynamics Resea  
Row: 5 Column: 3

-- Field Characteristics Table --

Field Name	1	Rev	Ccl	Size	Display	Dsp Act	D Sp	Prompt	Pos
SIGNATURE	1	17	40	30	1	INPUT			TC
MEMO	1	15	6	21	1	INPUT		memo	BC
DOLLARS	1	12	6	57	1	INPUT		dollars	PT
AMOUNT	1	10	66	12	1	INPUT		S	LT
PAY_TO	1	10	6	57	1	INPUT		Pay to the Order of	
CRK_DATE	1	8	60	12	1	INPUT		Date	LT

PSG:  Make Test Modifications now  Application

Figure 5-44 Test Screen 40

If cursor placed where marked below and <pf16> is pressed,

FORM EDIT MODE

For PDL File UTPFORM

TASK  H  
Type  A

Gen. PDL  Form

FORM TESTFORM  
Size  77 by  17  
Background  BLACK  
Prompt  Structural Dynamics Resea  
Row  5 Column  3

-- Field Characteristics Table --

Field Name	T	Row	Col	Size	Display	Dsp	Act	D	Sp	Prompt	Pos
SIGNATURE	I	17	40	30	INPUT						TC
MEMO	I	12	4	21	INPUT	I	3	0	memo		BC
DOLLARS	I	12	4	57	INPUT					dollars	BT
AMOUNT	I	10	66	12	INPUT					S	LT
PAY TO	I	10	4	57	INPUT					Pay to the Order of	LT
CRN DATE	I	8	60	12	INPUT					Date	LT

More...

MSG  I Make Your Modifications One application

Figure 5-45 Test Screen 41

UTP620344402  
30 September 1990

The result should be.

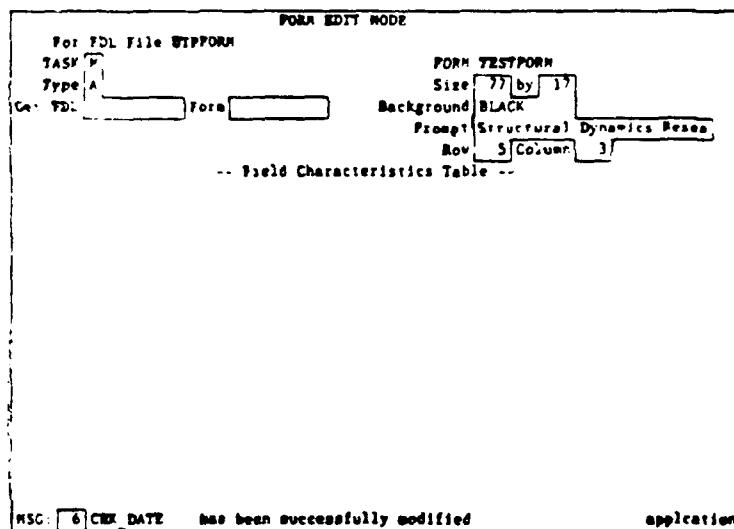


Figure 5-46 Test Screen 42

If cursor is placed where marked below and <ENTER> is pressed,

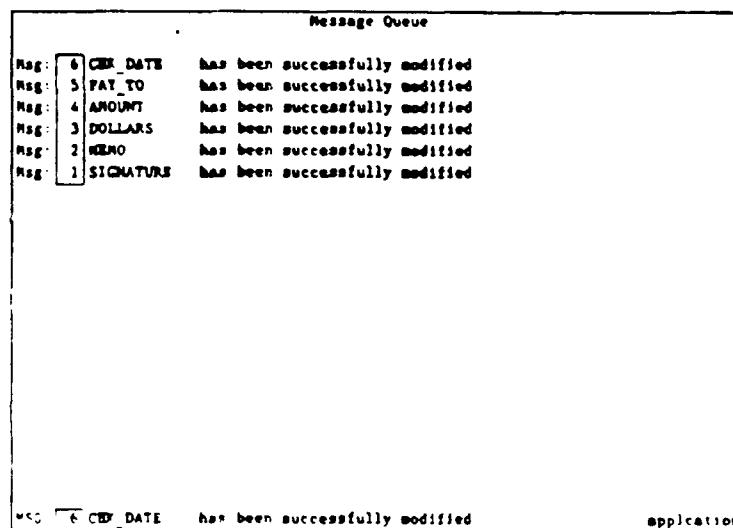


Figure 5-47 Test Screen 43

The result should be.

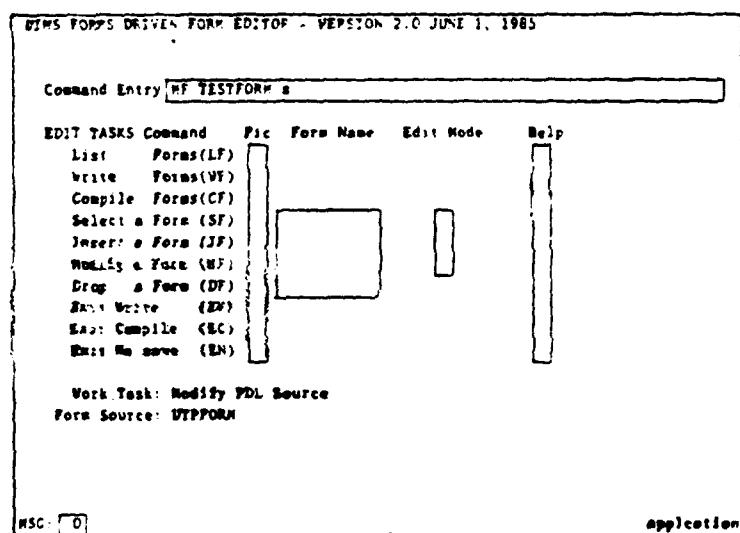


Figure 5-48 Test Screen 44

If cursor is placed where marked below and <pf16> is pressed,

**FIELD EDIT MODE**

For FDL File UTPFORM

**TASK**  **Field**  **Type**   
**Direct**  **Get FDL**  **Form**

**PORM TESTFORM**  
Size  77 by  19  
Background  BLACK  
Prompt  Structural Dynamics Assess  
Row  5 Column  3

**REQUIRED:**  
**FIELD**  **Type**   
**Row**  **Column**  **By**   
**Display**  **Background**

**OPTIONAL:**  
**Display**  **Field**   
**Actual**  **Repetition**   
**Direction**  **Spacing**   
**Prompt**   
**Pos**  **Row**  **Col**

**ITEM OPT**

**Justify**  **Data Type**  **MIN Value**   
**Case**  **Enter/Fill**  **MAX Value**

**W5:**  **Enter task and field to be acted on** **application**

Figure 5-49 Test Screen 45

The result should be.

**FIELD EDIT MODE**

For FDL File: UTPFORM

**TASK:**

**Field:**   
**Type:**

**Direct:**   
**Get FDL:**  **For:**

**FORM TESTFORM**  
**Size:**    
**Background:**   
**Prompt:**   
**Row:**  **Column:**

**REQUIRED:**

**FIELD:**  **Type:**

**Row:**  **Column:**

**Size:**

**Display:**   
**Background:**

**OPTIONAL:**

**Display:**  **Field:**   
**Actual:**  **Repetition:**   
**Direction:**  **Spacing:**   
**Prompt:**   
**Pass:**  **Row:**  **Col:**

**STEP 00.1:**

**Justify:**  **Data Type:**  **Min Value:**   
**Case:**  **Enter/Fill:**  **Max Value:**

MSG:  Enter task and field to be acted on application

Figure 5-50 Test Screen 46

If cursor is placed where marked below and <pf16> is pressed,

**FIELD EDIT MODE**

For FDL File UTPPFORM

Task	CHK DATE
Field	CHK DATE
Type	
Direct	C
Col	FL
Form	

FORM TESTPFORM  
Size 77 by 17  
Background BLACK  
Prompt Structural Dynamics Resea  
Row 5 Column 3

**REQUIRED:**

FIELD	CHK DATE	Type	I
Row	0	Column	60
Size	12	By	1
Display	OUTPUT		

Background

**OPTIONAL:**

Display	Field
Actual	Repetition
Direction	<->
Spacing	

Prompt Date  
Pos 17 Row 0 Col 55

**STEP ONLY:**

Justify	Data Type	Min Value	
Case	Enter F:1	Max Value	

MSG  Make Your Modifications now application

Figure 5-51 Test Screen 47

The result should be.

**FIELD EDIT MODE**

For FD. File UTPFORM

TASK	Form
Field	CHP DATE
Type	
Direct	
Get FDL	Form

FORM TE.TFORM

Size	77 by 17
Background	BLACK
Prompt	Structural Dynamics Reses
Row	5 Column 3

**REQUIRED:**

FIELD	CHP DATE	Type	I
Row	8	Column	60
Size	12	By	1
Display	OUTPUT		
Background			

**OPTIONAL:**

Display	Actual	Field
Direction		Repetition
Spacing		<->

Prompt Date  
Pos LT Row 8 Col 35

**ITEM ONLY:**

"01/11/1985"			
Display	Date Type	MIN Value	
Case	States(8:11)	MAX Value	

MSG:  Make Your Modifications now

application

Figure 5-52 Test Screen 48

UTP62034402  
30 September 1990

If cursor is placed where marked below and <ENTER> is pressed,

**FIELD EDIT MODE**

For PDL File UTPFORM

**TASK**  **FORM TESTFORM**

**Field**  **Size**

**Type**  **Background**

**Direct**  **Prompt**

**Get PDL**  **Row**

**REQUIRED:**

**FIELD**  **Type**  **OPTIONAL:**

**Row**  **Display**  **Field**

**Column**  **Actual**  **Repetition**

**Size**  **By**  **Direction**

**Display/** **Spacing**

**Background** **Prompt**

**ITEM ONLY:**

**Justify**  **Case**  **Data Type**  **MIN Value**

**Enter/Fill**  **MAX Value**

MSG:  Field was successfully modified

application

Figure 5-53 Test Screen 49

The result should be.

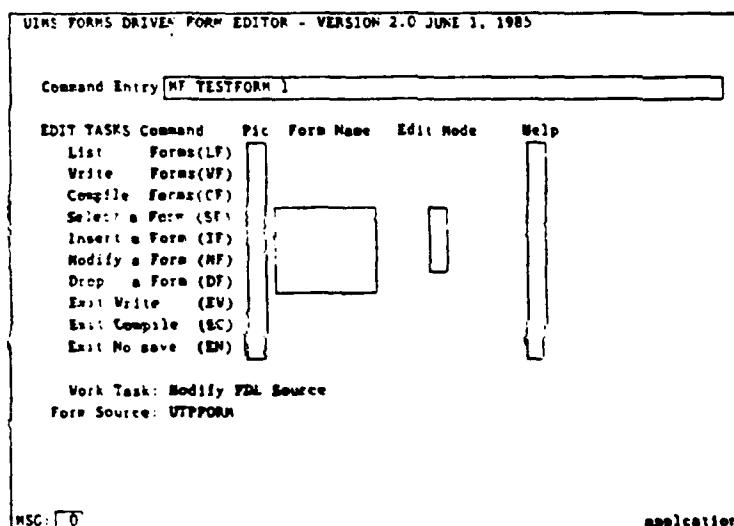


Figure 5-54 Test Screen 50

If cursor is placed where marked below and <ENTER> is pressed,

Structural Dynamics Research Corporation  
2000 Eastman Drive  
Milford, Ohio 45150

\*Pay to the Order of" >Date> (-----)  
(-----) >\$> (-----)  
(-----) <dollars<  
(-----)  
"memo" (-----)  
(-----)

Figure 5-55 Test Screen 51

The result should be.

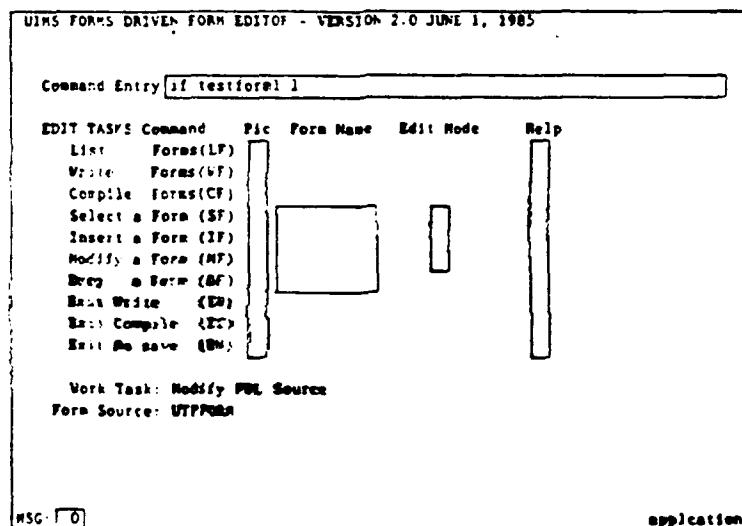


Figure 5-56 Test Screen 52

If cursor is placed where marked below and <ENTER> is pressed,

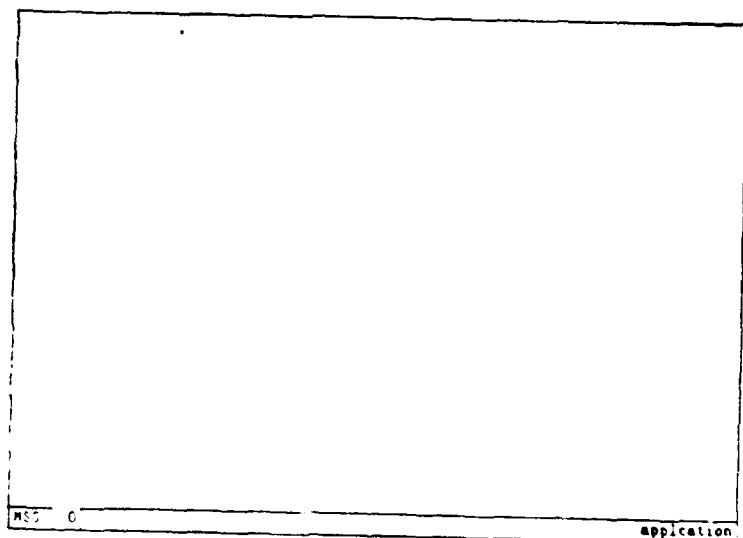


Figure 5-57 Test Screen 53

UTP620344402  
30 September 1990

The result should be.

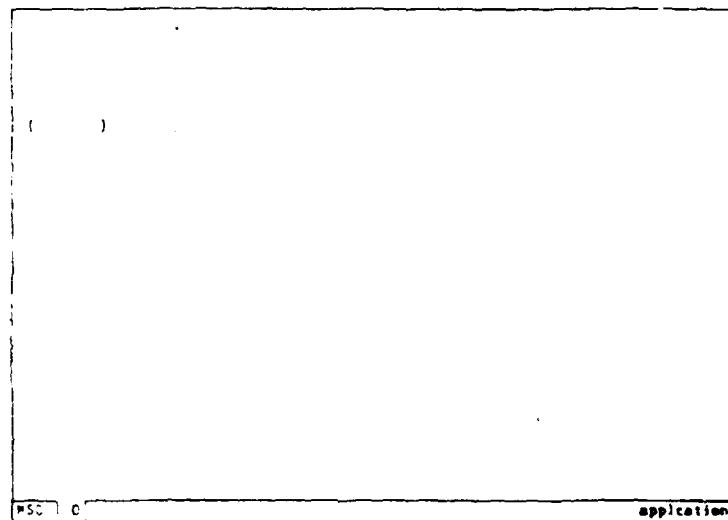


Figure 5-58 Test Screen 54

If <pf14> is pressed, the result should be.

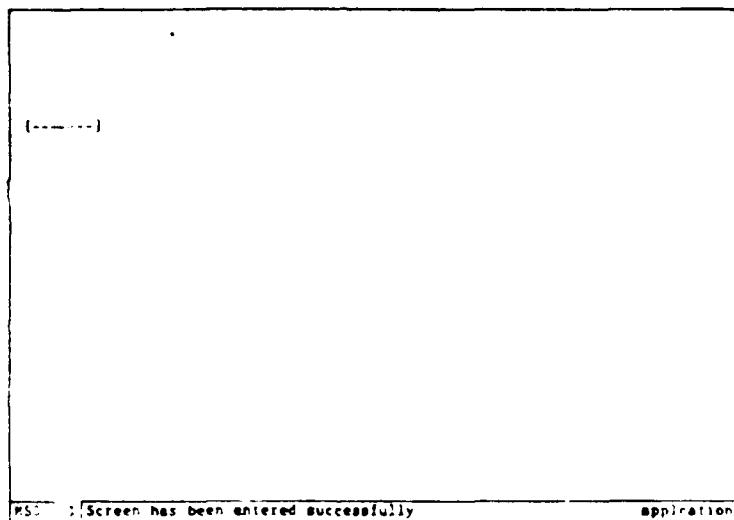


Figure 5-59 Test Screen 55

If <pf13> is pressed, the result should be.

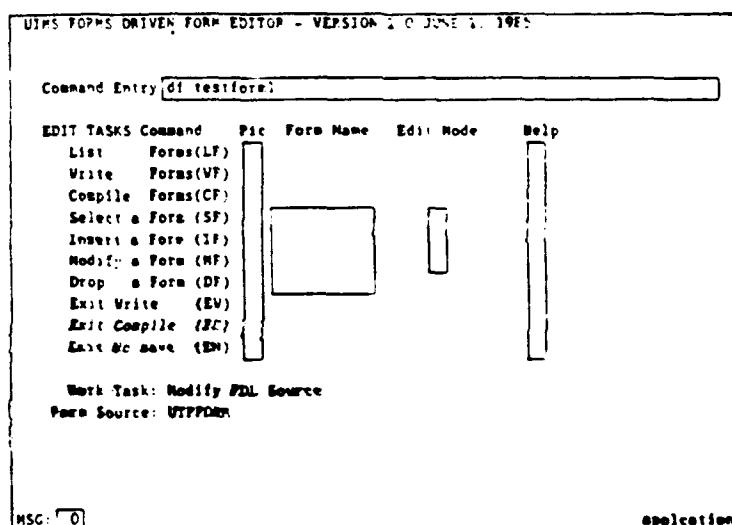


Figure 5-60 Test Screen 56

If <pf13> is pressed, the result should be.

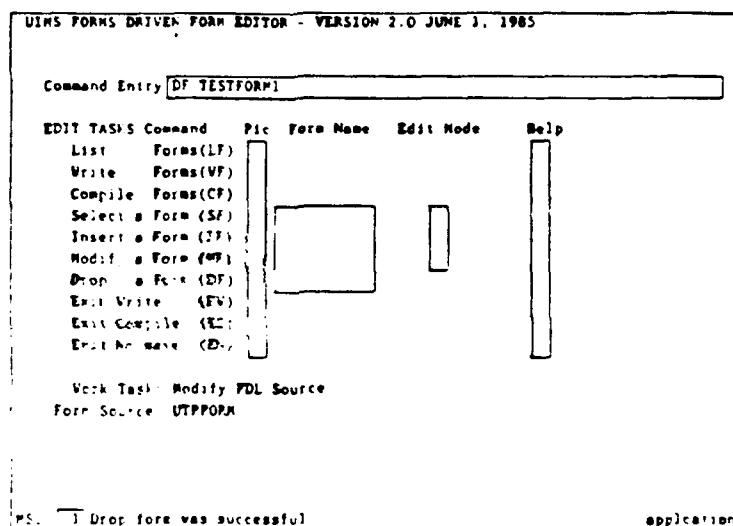


Figure 5-61 Test Screen 57

UTP62034402  
30 September 1990

If cursor is placed where marked below and <ENTER> is pressed,

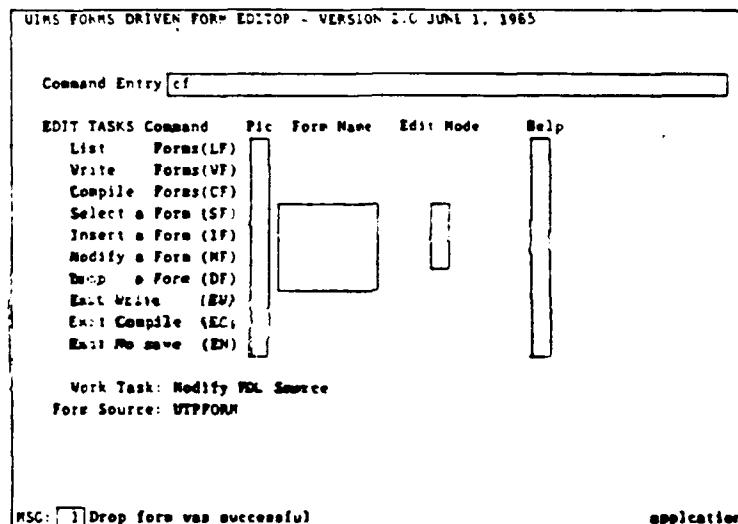


Figure 5-62 Test Screen 58

The result should be.

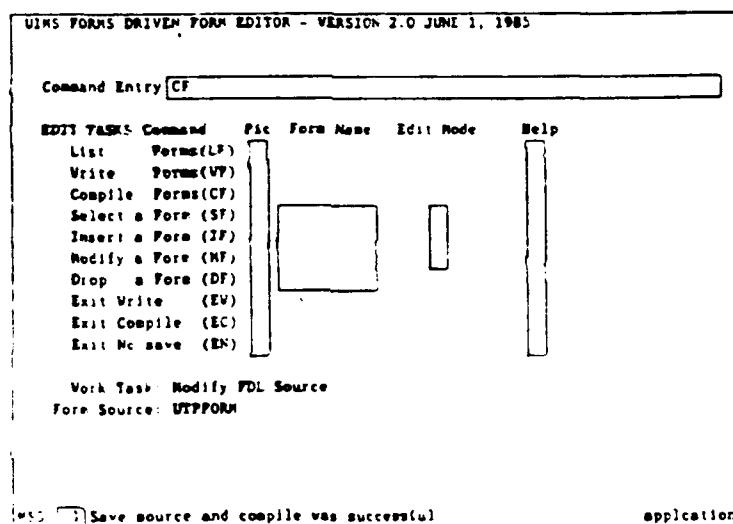


Figure 5-63 Test Screen 59

If cursor is placed where marked below and <ENTER> is pressed,

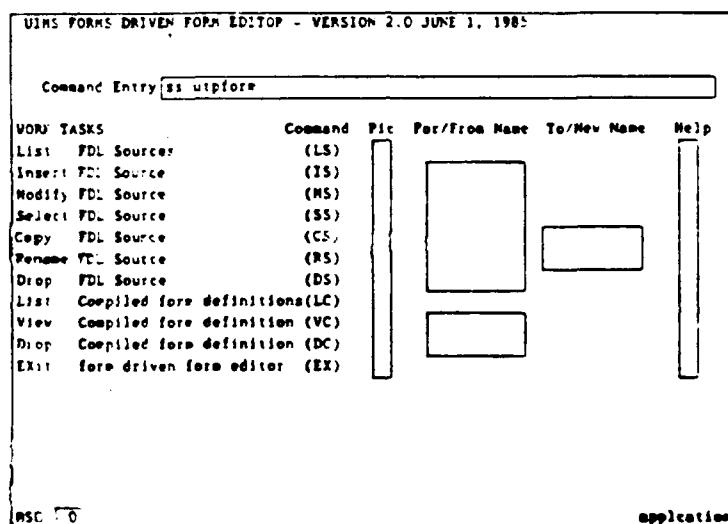


Figure 5-64 Test Screen 60

UTP620344402  
30 September 1990

The result should be.

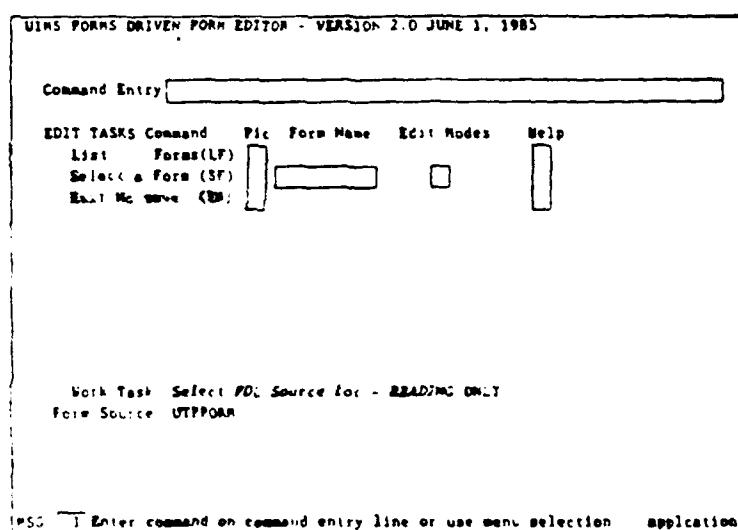


Figure 5-65 Test Screen 61

UTP620344402  
30 September 1990

If cursor is placed where marked below and <pf16> is pressed,

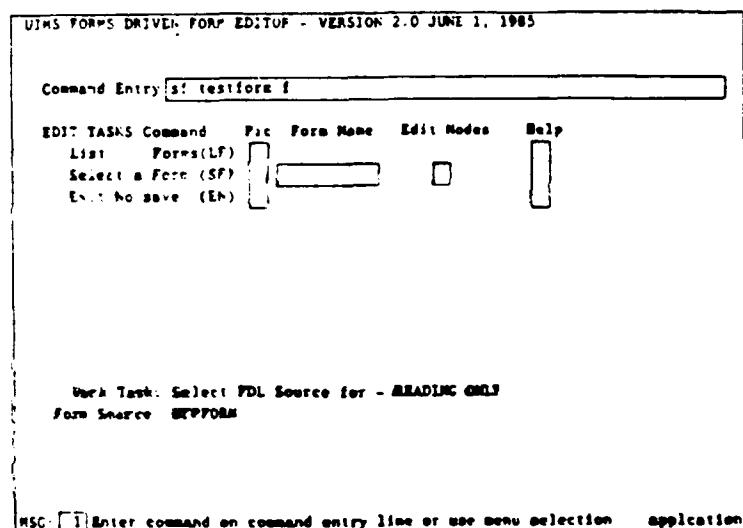


Figure 5-66 Test Screen 62

The result should be.

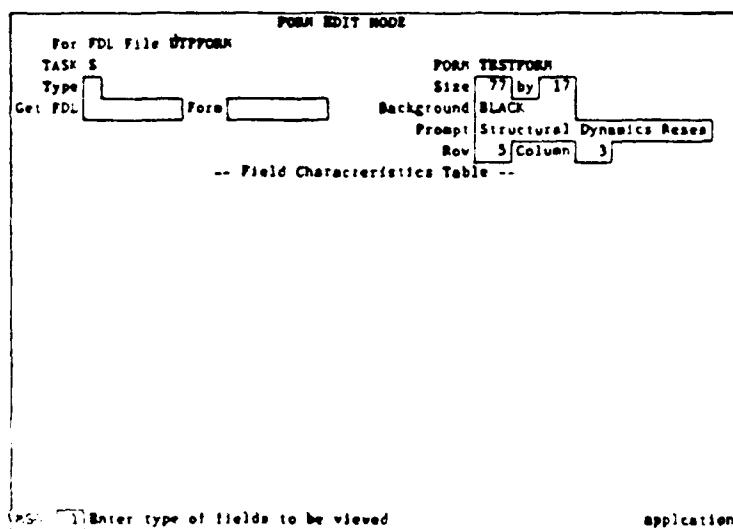


Figure 5-67 Test Screen 63

UTP620344402  
30 September 1990

If cursor is placed where marked below and <ENTER> is pressed,

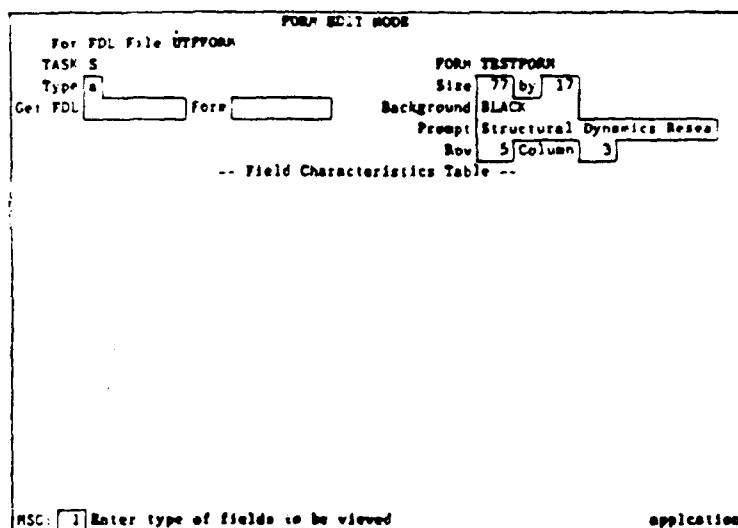


Figure 5-68 Test Screen 64

The result should be.

FORM EDITT MODE

For FDL File UTPFORM

TASK S

Type A

Get FDL Form

FORM TESTFORM

Size 77 by 17

Background BLACK

Prompt Structural Dynetics Resea

Row 5 Column 3

-- Field Characteristics Table --

Field Name	T	Row	Col	Size	Display	Dsp Act	D Sp	Prompt	Pos
SIGNATURE	I	17	40	30	1	INPUT			TC
MEMO	I	15	4	21	1	INPUT			BC
DOLLARS	I	12	4	57	1	INPUT			RT
AMOUNT	I	10	66	12	1	INPUT			LT
PAT_TO	I	10	4	57	1	INPUT			
CIN_DATE	I	0	60	12	1	OUTPUT			LT

More...

MSG C

application

Figure 5-69 Test Screen 65

UTP62034402  
30 September 1990

If cursor is placed where marked below and <pf16> is pressed,

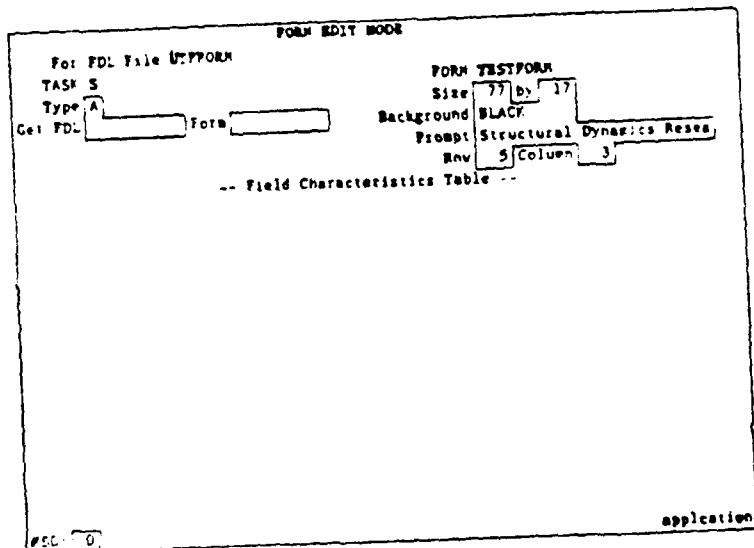


Figure 5-70 Test Screen 66

The result should be.

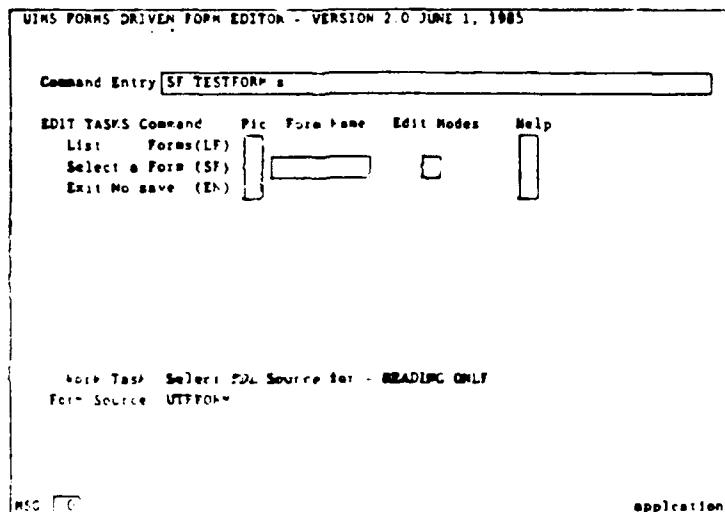


Figure 5-71 Test Screen 67

If cursor is placed where marked below and <ENTER> is pressed,

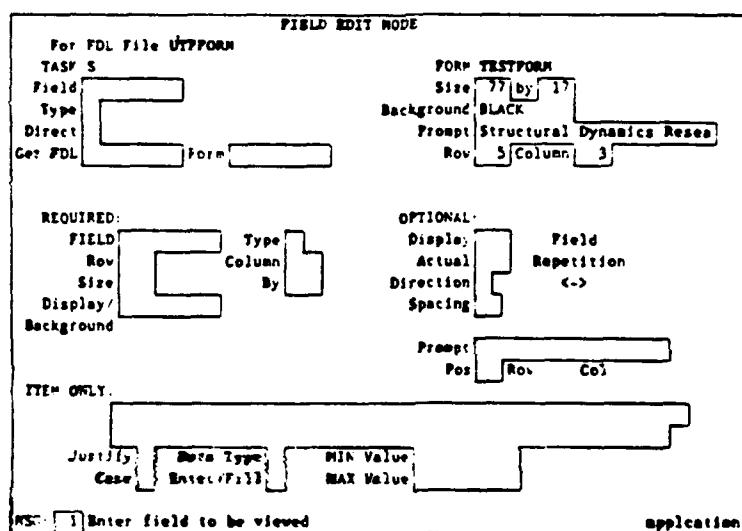


Figure 5-72 Test Screen 68

The result should be.

**FIELD EDIT MODE**

For FDL File UTPPFORM  
TASK S

Field   
Type   
Direct   
Get FDL  Form

FORM TESTFORM  
Size  by   
Background  BLACK  
Prompt  Structure  Dynamics   
Row  S/Column  3

**REQUIRED:**  
FIELD  Type   
Row  Column   
Size  By   
Display   
Background

**OPTIONAL:**  
Display  Field  
Actual  Repetition   
Direction   
Spacing   
Prompt   
Pos  Row  Col

ITEM COUNT:

Justify  Date Type  MIN Value   
Case  Enter: Fill  MAX Value

PSD:  Enter field to be viewed application

Figure 5-73 Test Screen 69

If cursor is placed where marked below and <ENTER> is press,

**FIELD EDIT MODE**

For FDL File **UTPFORM**

**TASK S**

Field  Type  Row  Column  Size  Direct  Form  Get FDL

**FORP TESTFORM**

Size  by  Background  Prompt  Row  Column

**REQUIRED:**

FIELD  Type  Row  Column  Size  By  Display  Background

**OPTIONAL:**

Display  Field  Actual  Repetition  Direction  Spacing  Prompt  Pos  Row  Col

**ITEM ONLY:**

Justify  Data Type  MIN Value  Case  Enter/Fill  MAX Value

MSG:  application

Figure 5-74 Test Screen 70

The result should be.

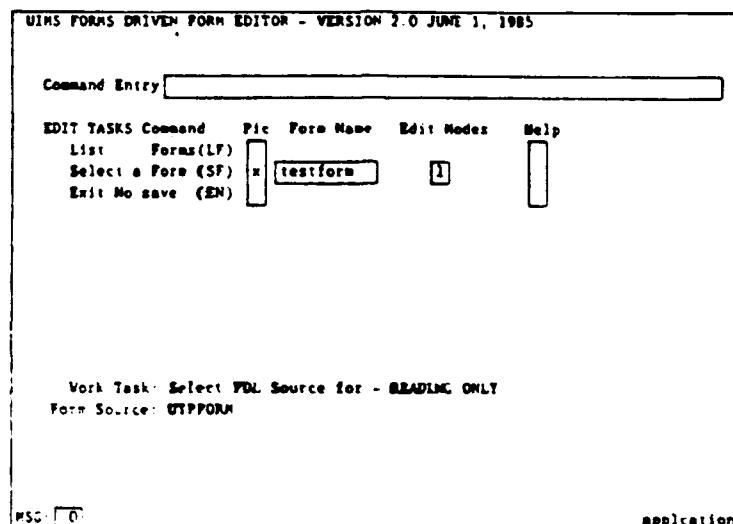


Figure 5-75 Test Screen 71

If <pf13> is pressed, the result shoud be.

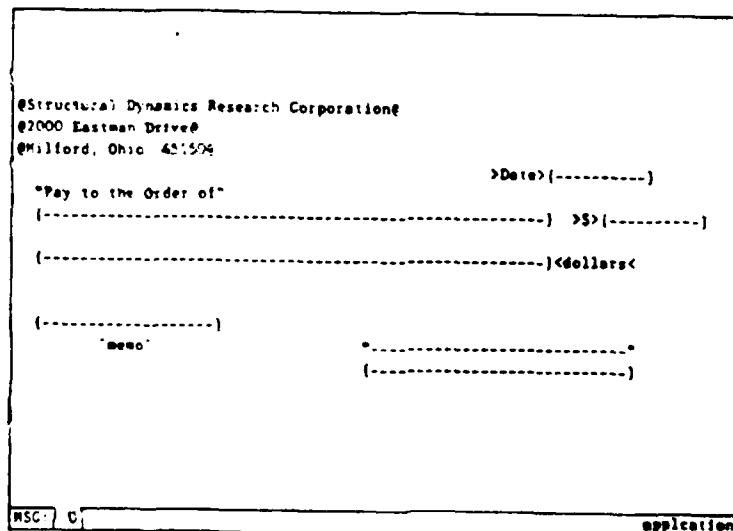


Figure 5-76 Test Screen 72

If cursor is placed where marked below and <ENTER> is press,

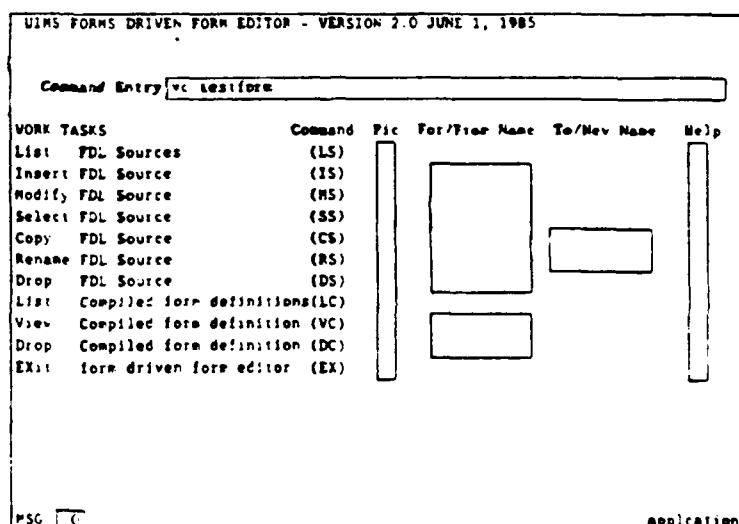


Figure 5-77 Test Screen 73

UTP620344402  
30 September 1990

The result should be.

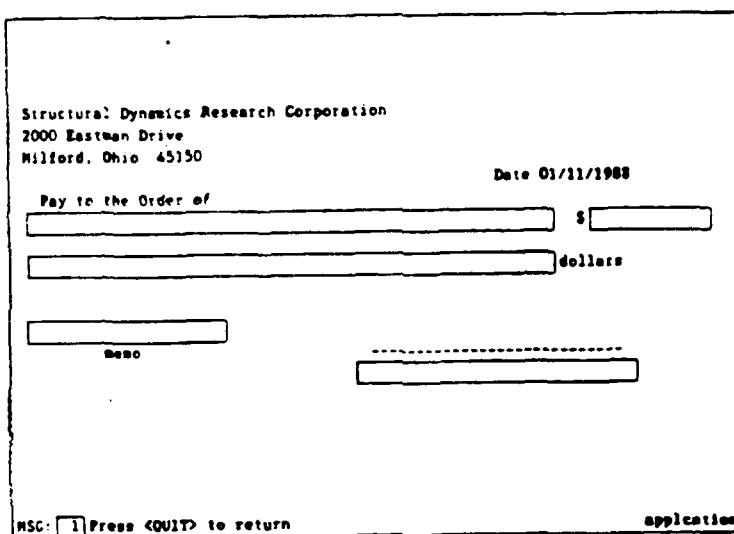


Figure 5-78 Test Screen 74

UTP620344402  
30 September 1990

If cursor is placed where marked below and <ENTER> is pressed,

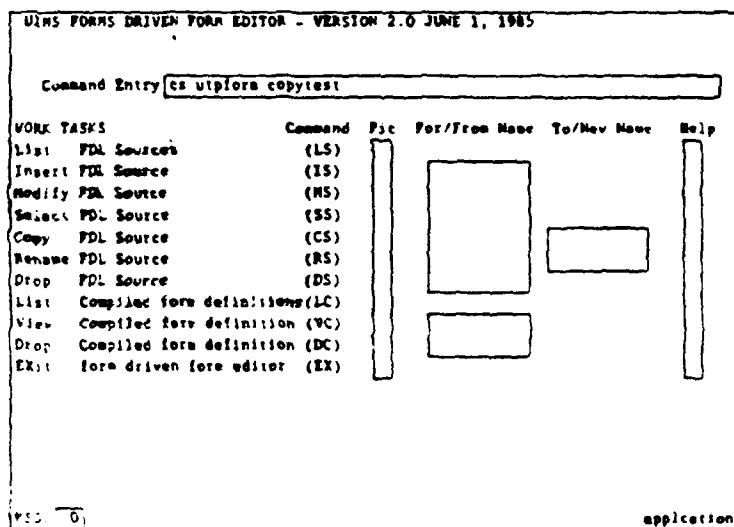


Figure 5-79 Test Screen 75

The result should be.

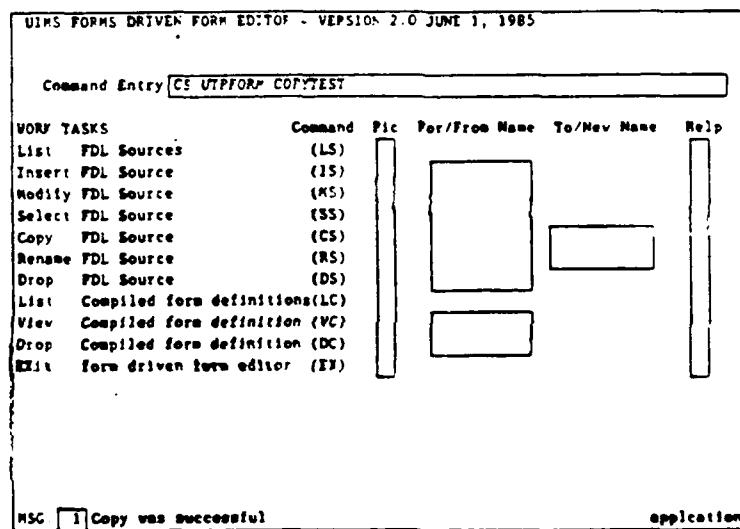


Figure 5-80 Test Screen 76

If the following is entered,

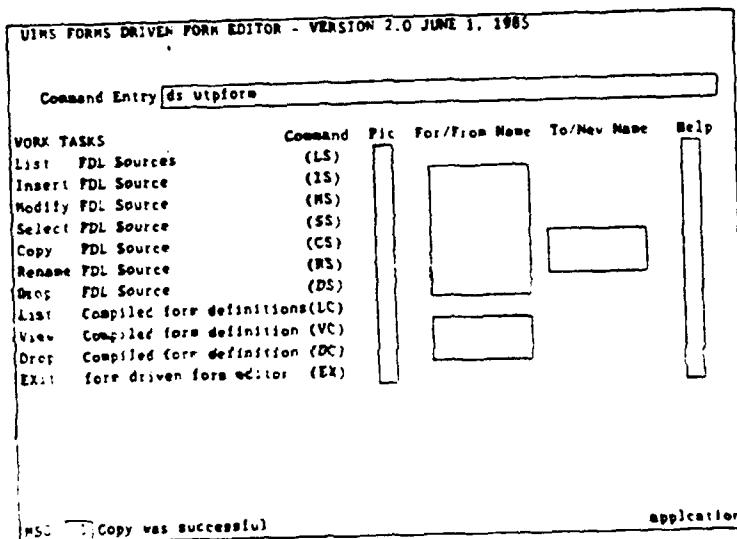


Figure 5-81 Test Screen 77

The result should be.

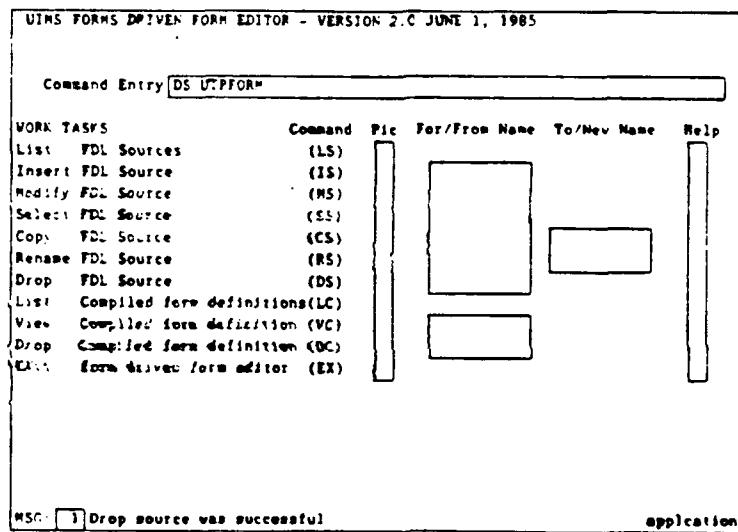


Figure 5-82 Test Screen 78

If the following is entered,

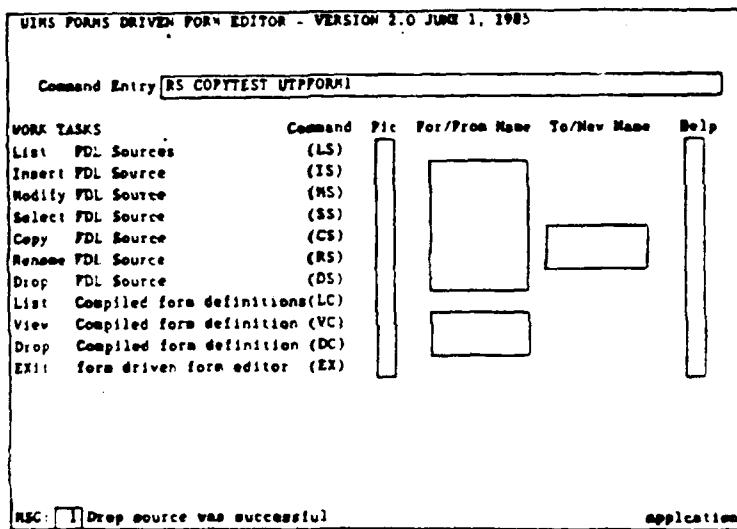


Figure 5-83 Test Screen 79

UTP620344402  
30 September 1990

The result should be.

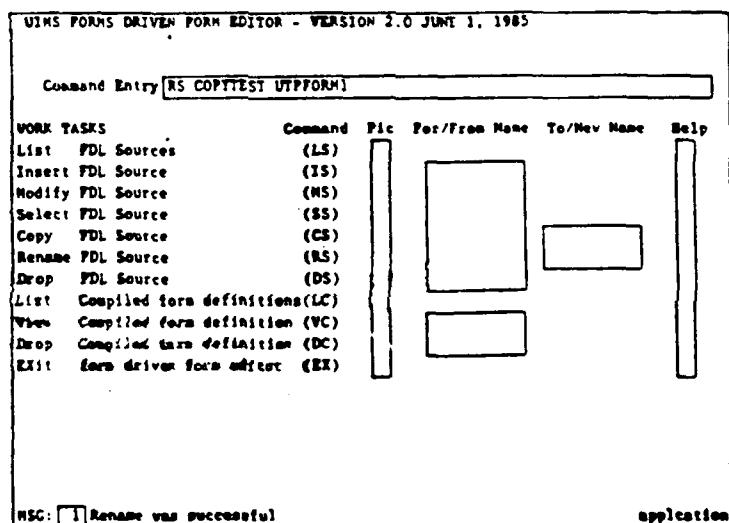


Figure 5-84 Test Screen 80

If <pf14> is pressed, the result should be.

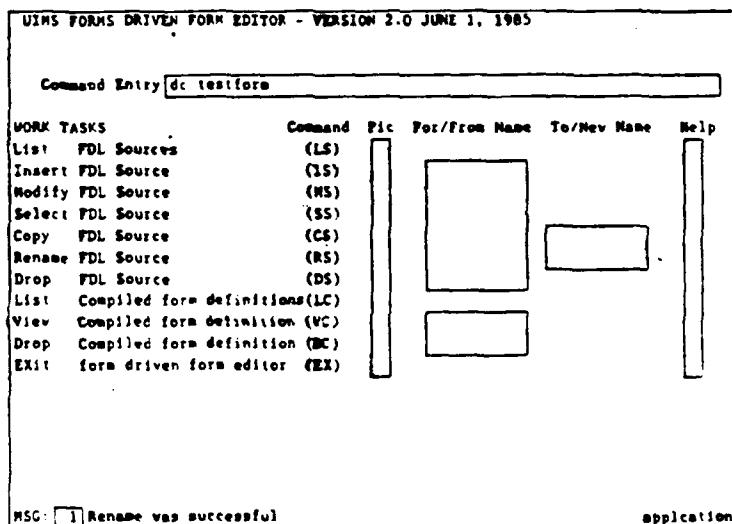


Figure 5-85 Test Screen 81

If the following is entered,

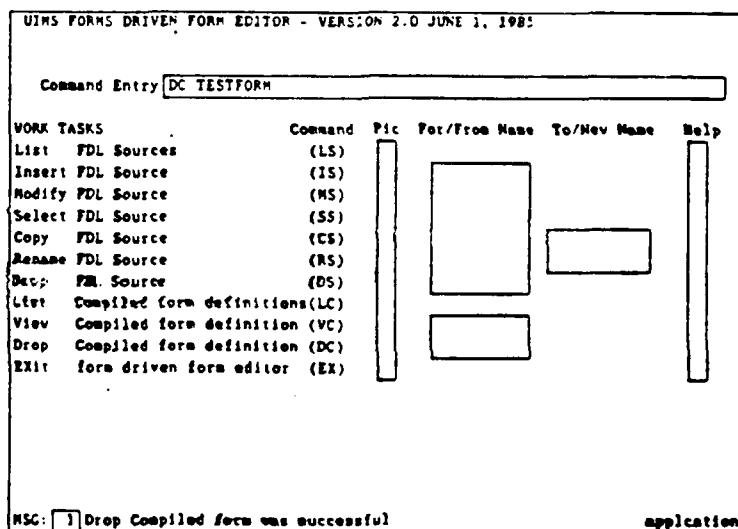


Figure 5-86 Test Screen 82

The result should be.

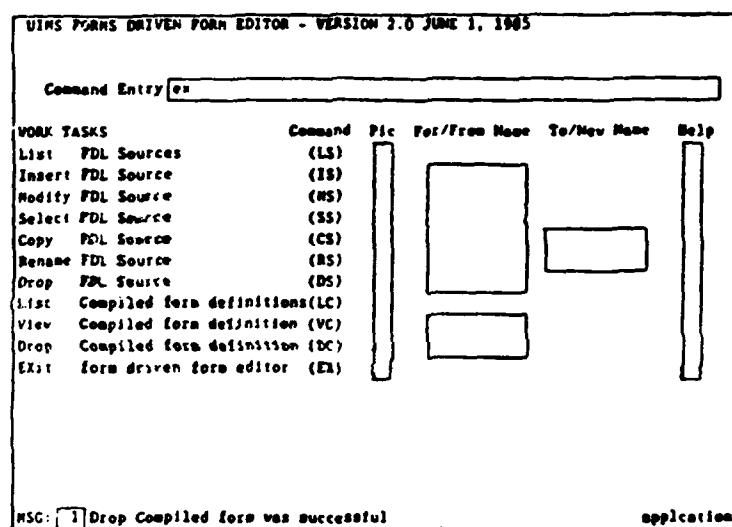


Figure 5-87 Test Screen 83